APPENDICES

APPENDIX A – NOTICE OF PREPARATION/INITIAL STUDY/RESPONSES

APPENDIX B – BIOLOGICAL STUDY

APPENDIX C – TRAFFIC STUDY

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

NOTICE OF PREPARATION

PROJECT TITLE: **Chino Hills State Park Entrance Road**

PROJECT LOCATION: The proposed project is located in San Bernardino County at the northern end on Chino Hills State Park adjacent to the City of Chino Hills. The northern limit of the project is located less than ½ mile south of Soquel Canyon Parkway at the intersection of Bane Canyon Road, Elinvar Road and Sapphire Road. The project extends approximately two miles to the south and crosses property owned by the City of Chino Hills approximately ½ mile south of the northern project limit. The southern project limit is located where the previously built two-lane paved road begins in the park interior.

PROJECT DESCRIPTION: This project would build a new improved two-lane road on the general alignment of the existing unimproved dirt entrance road (Bane Canyon Road) for a distance of approximately 2 miles. Construction would relocate the road onto a more favorable alignment, as feasible, and utilize retaining walls to reduce cut and fill slopes. The proposed project would also construct a multi-use trail, include underground utilities, a trailhead, road drainage facilities, a park entrance station with utilities, a scenic overlook, a maintenance storage area, a comfort station, erosion control measures, and minor intersection improvements.

POSSIBLE ENVIRONMENTAL EFFECTS: This project is located within a Habitat Conservation Plan (HCP) and has potential significant adverse effects on the natural environment (wildlife and vegetation) and the viewshed from various locations due to steep topography and other site constraints. These potentially significant effects would be most noticeable during and immediately after construction. The project may also have significant environmental effects on geology, hydrology and water quality, ambient noise and visitor access (during construction), paleontology and utilities. Please see the Initial Study Checklist for additional detail.

PUBLIC INFORMATION MEETING: A public information meeting will be held on February 11th, 2004 from 7:00 to 8:30 PM at the Chino Hills High School. The address is 16150 Pomona Rincon Road, Chino Hills, CA. Preliminary maps of the proposed project will be available for review.

The California Department of Parks and Recreation is the Lead Agency under the requirements of the California Environmental Quality Act and is considering the preparation of an environmental document for the project identified above. We need to know the views of your agency or organization as to the scope and content of the environmental information that is germane to your agency's or organization's statutory responsibilities or interest in connection with the proposed project. If you do not belong to an agency or organization, this notice has been sent to inform you that detailed planning for the park entrance road is commencing and to provide you with an early opportunity to learn more about the project at the Public Information Meeting and discuss the project. If you have issues that are important to you, a response to the Notice of Preparation will provide you the opportunity to request that the EIR identify these issues.

Your response must be sent to the address below not later than thirty (30) days after the filing date of this notice. We would appreciate the name of a contact person in your agency or organization.

DEPARTMENT OF PARKS AND RECREATION CONTACT PERSON

Tina Robinson, Environmental Coordinator
California Department of Parks and Rereation
Southern Service Center
8885 Rio San Diego Drive, Suite 270
San Diego, CA 92108

(619) 220-5300
e-mail: enviro@parks.ca.gov

ENVIRONMENTAL (INITIAL STUDY) CHECKLIST

I. BACKGROUND INFORMATION

Project Title: Chino Hills State Park Entrance Road **Project ID# 7237**
PCA# 18717

Contact Person: Tina Robinson **Telephone: (619) 220-5300**
Location: Chino Hills State Park, Orange County
Checklist Date: 1-27-04
Project Description: California State Parks is proposing to construct an improved paved two-lane road on the general alignment of the existing unimproved dirt entrance road for a distance of approximately 2 miles. Construction would relocate the road onto a more favorable alignment, as feasible, and utilize retaining walls. The project would also construct a multi-use trail, include underground utilities, a trailhead, road drainage facilities, a park entrance station with utilities, a scenic overlook, a maintenance storage area, comfort station, erosion control measures, and minor intersection improvements.

II. ENVIRONMENTAL CHECKLIST

	POTENTIALLY SIGNIFICANT IMPACT	SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
1. AESTHETICS.				
ISSUES				
Would the project:				
a) Have a substantial adverse effect on a scenic vista?	☒	☐	☐	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☒	☐	☐	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

COMMENTS

Due to the extremely severe topography at several locations along the entrance road, it is anticipated that large cuts, retaining walls and fills slopes will be necessary. The park entrance will change from a small, unimproved road to a two-lane paved road with an adjacent multi-use trail.

MITIGATION

It is anticipated that design measures will incorporate aesthetic treatments and revegetation to minimize visual effects but that, in several areas, these effects will remain significant even with mitigation. Specific mitigation will be addressed and developed in the EIR.

2. AGRICULTURAL RESOURCES.				
In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997), prepared by the California Department of Conservation as an optional model for use in assessing impacts on agricultural and farmland. Would the project:				
ISSUES				
a) Convert Prime Farmland, Unique Farmland, or	☐	☐	☐	☒

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?	☐	☐	☐	☒
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?	☐	☐	☐	☒

COMMENTS:

The site was used for cattel grazing prior to acquisition into the State Park system. It is no longer used for agricultural purposes.

MITIGATION

No mitigation will be proposed as the potential impacts to Agricultural Resources are negligable.

3. AIR QUALITY.

ISSUES

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied on to make the following determinations. Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan or regulation?	☐	☐	☒	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations (e.g., children, the elderly, individuals with compromised respiratory or immune systems)?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

COMMENTS:

The construction of the improved entrance road to Chino Hills State Park will attract more vehicles to the park as addressed in the Chino Hills State Park General Plan. On-road motor vehicles are the largest contributors to CO, NOx, and ROG emissions. However, the projected total of vehicles traveling to the park on the Entrance Road is low (945 vehicles) relative to the total Vehicle Miles Traveled (VMT) within the South Coast Air Basin (315,000,000). Dust emissions during construction will be subject to standard dust control measures for state projects. There is a residential area close to the northern end of the project so dust control measures will be strictly enforced.

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT

MITIGATION

Standard specifications for state projects will be utilized to minimize potential air quality effects due to dust during construction.

4. BIOLOGICAL RESOURCES.

ISSUES

Would the project:

a)	Have a substantial adverse effect, either directly or through habitat modification, on any species identified as a sensitive, candidate, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?	☒	☐	☐	☐
b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?	☒	☐	☐	☐
c)	Have a substantial adverse effect on federally protected wetlands, as defined by §404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☒	☐	☐	☐
d)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐
e)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐
f)	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☒	☐	☐

COMMENTS:

The project is located within a Habitat Conservation Plan (HCP) area (Please note that this was in error – the project is not located within an HCP – Aug/2004) and extends along the existing entrance road corridor which contains riparian and wetland areas. It is anticipated that sensitive species utilize the wetland and riparian areas along both the existing road and the new road alignment. Although impacts to this area will be minimized, they cannot be avoided due to the steep topography and close proximity of the creek. The full extent and significance of the impacts to sensitive species, habitat, and wetlands will be detailed in the EIR and may drop to less than significant with mitigation but a worst case scenario may show the impacts as significant, even with mitigation. It is the intention of California State Parks to mitigate the adverse effects to these resources to the fullest extent feasible.

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT

MITIGATION

Potentially significant resources will be avoided wherever possible through sensitive design and construction and those resources that cannot be avoided will be mitigated according to the terms of the HCP. The design and proposed mitigation will be detailed in the EIR.

5. CULTURAL RESOURCES.

ISSUES

Would the project:

a) Cause a substantial adverse change in the significance of a historical resource, as defined in §15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource, pursuant to§15064.5?	☐	☐	☒	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐
d) Directly or indirectly destroy a unique paleontological resource or site, or unique geologic feature?	☐	☐	☒	☐

COMMENTS:

No potentially eligible historic resources are located on the site and on-site surveys for archaeological sites have indicated that no resources are present. However, the vegetation is dense and limits survey visibility. With the implementation of grading, there is a slight chance of disturbing buried resources, particularly in cut areas.

MITIGATION

Should an underground resource be discovered, work will shift from that area until a qualified cultural resource specialist can evaluate the discovery.

6. GEOLOGY AND SOILS.

ISSUES

Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area, or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☒	☐	☐

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
c) Be located on a geologic unit or soil that is unstable, or that would become unstable, as a result of the project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☒	☐	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1997), creating substantial risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste disposal systems, where sewers are not available for the disposal of waste water?	☐	☐	☒	☐
f) Directly or indirectly destroy a unique paleontological resource or site, or unique geologic feature?	☐	☒	☐	☐

COMMENTS:

The project is located in southern California, an area known for seismic activity. It is not anticipated that construction of the entrance road would expose people or property to a high risk of danger due to seismic activity although the risk of a landslide in the event of a catastrophic seismic event cannot be completely eliminated. The project will require substantial grading and landform changes but the risk of substantial adverse effects will be eliminated through proper engineering and site design. During construction and until revegetated slopes mature, the project will have greater risk of soil erosion and landslides. The use of appropriate Best Management Practices (BMPs) to support these areas will be proposed in the EIR. A septic system that operates to Regional Water Quality Control Board standards will be utilized at the Entrance Station. A paleontological study will be conducted as part of the EIR.

MITIGATION

see above

7. HAZARDS AND HAZARDOUS MATERIALS.

ISSUES

Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	☒
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials, substances, or waste into the environment?	☐	☐	☐	☒
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites, compiled pursuant to Government Code §65962.5, and, as a result, create a significant hazard to the public or environment?	☐	☐	☐	☒

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
e) Be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport? If so, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) Be located in the vicinity of a private airstrip? If so, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
h) Expose people or structures to a significant risk of loss, injury, or death from wildland fires, including areas where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☒	☐

COMMENTS:

The existing road is subject to closure during major rainstorm events due to landslides and its slippery surface. Therefore, vehicular access to the interior of the park must be closed subjecting visitors and the resident ranger to isolation during storm events. Construction of the entrance road project will allow for all-weather access into the park's interior. Parks rangers will evacuate the park or limit campfire activities during times of high risk due to wildfires.

MITIGATION

see above

8. HYDROLOGY AND WATER QUALITY.

ISSUES

Would the project:

a) Violate any water quality standards or waste discharge requirements?	☐	☒	☐	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, in a manner which would result in substantial on- or off-site erosion or siltation?	☐	☒	☐	☐
d) Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in on- or off-site flooding?	☐	☒	☐	☐

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☒	☐	☐
f) Substantially degrade water quality?	☐	☒	☐	☐
g) Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map, or other flood hazard delineation map?	☐	☐	☐	☒
h) Place structures that would impede or redirect flood flows within a 100-year flood hazard area?	☐	☒	☐	☐
i) Expose people or structures to a significant risk of loss, injury, or death from flooding, including flooding resulting from the failure of a levee or dam?	☐	☒	☐	☐
j) Result in inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

COMMENTS:

The project will construct a new roadway that travels generally alongside or within a creek corridor and, depending on the alternative selected, may cross the creek in several locations. This will require grading in proximity to the creek and the crossing of several tributary drainages. Runoff water from the roadway surface may concentrate and wash sediment and pollutants generated by automobile traffic into the creek or wetland areas. It is anticipated that California State Parks will design the roadway to minimize the potential impacts of erosion, sediment, and pollutants both during operation and construction of the proposed project.

MITIGATION

Site design will need to incorporate measures to reduce the potential impacts below a level of significance. A hydrology study will be conducted as part of the EIR.

9. LAND USE AND PLANNING.

ISSUES

Would the project:

a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with the applicable land use plan, policy, or regulation of any agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☒	☐	☐
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☒	☐

COMMENTS:

The project is located within a habitat conservation plan as a part of Chino Hills State Park. Construction of the Entrance Road will minimize but not be able to avoid adverse effects to biological and hydrological resources due to site constraints. Additionally, the northern end of the proposed project is located near an existing residential area. Conflicts currently exist between park users and residents due to noise and off-site visitor parking along Sapphire and Elinvar Roads. Because the existing road prevents some vehicles from safely accessing the park's interior, it is anticipated that many of these park

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT

visitors will use the proposed project to drive to the park's interior. The park entrance station and parking lot will be located in the interior of the park to reduce these potential conflicts.

MITIGATION

California State Parks will strive to minimize adverse effects to the creek and riparian corridor and the nearby neighborhood. The EIR will provide additional design and mitigation detail.

10. MINERAL RESOURCES.

ISSUES

Would the project:

a) Result in the loss of availability of a known mineral resource that is or would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

COMMENTS:

There are no known mineral resources on the site.

MITIGATION

not necessary

11. NOISE.

ISSUES

Would the project:

a) Generate or expose people to noise levels in excess of standards established in a local general plan or noise ordinance, or in other applicable local, state, or federal standards?	☐	☒	☐	☐
b) Generate or expose people to excessive groundborne vibrations or groundborne noise levels?	☒	☐	☐	☐
c) Create a substantial permanent increase in ambient noise levels in the vicinity of the project (above levels without the project)?	☐	☒	☐	☐
d) Create a substantial temporary or periodic increase in ambient noise levels in the vicinity of the project, in excess of noise levels existing without the project?	☒	☐	☐	☐
e) Be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport? If so, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
f) Be in the vicinity of a private airstrip? If so, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

COMMENTS:

Both conventional vehicles and large vehicles including school buses, recreational vehicles, utility trucks, and trucks pulling horse trailers will utilize the access along the entrance road into the park. Many of these vehicles currently access the park on the existing road but it is anticipated that these numbers will increase. This increase is not expected to generate a significant increase in noise over the existing levels along Sapphire or Elinvar Road due to the infrequency of large vehicles entering the park and the slow speeds required at the Park entrance. However, during construction, it is anticipated that noise levels will be potentially significant to sensitive receptors in several locations. Residents near the park entrance will be exposed to high levels of construction noise for the northern end of the entrance road and for vehicle accessing the construction site. Wildlife in the riparian areas will be subjected to high levels of construction noise which could have adverse effects during nesting season when birds call to attract mates.

MITIGATION

California State Parks will endeavor to minimize the adverse effects of construction noise and vibration to all sensitive receptors. This will include voluntary compliance with local standards for construction noise near existing residential areas and may include monitoring and/or avoidance of excessive noise in close proximity to nesting sites. The details of the proposed mitigation will be developed in the EIR.

12. POPULATION AND HOUSING

ISSUES

Would the project:

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

COMMENTS:

The proposed project will not directly affect the construction or displacement of population or housing. Housing proposed as part of the local General Plans may receive a small market benefit due to the increased accessibility of the Park's interior.

MITIGATION

none proposed

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT

13. PUBLIC SERVICES.

ISSUES

Would the project:

a) Result in significant environmental impacts from construction associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:	☐	☒	☐	☐
Fire protection?	☐	☐	☒	☐
Police protection?	☐	☐	☒	☐
Schools?	☐	☐	☒	☐
Parks?	☐	☒	☐	☐
Other public facilities?	☐	☒	☐	☐

COMMENTS:

The proposed project is a public service project providing improved access to the Chino Hills State Park interior, campgrounds, trail heads, and day-use areas. A major water line serving the City of Chino Hills runs along the existing roadway and service must be maintained throughout construction of the Entrance Road. Potentially significant impacts would include disruption of water service in the event of an accident during construction and access impacts to state Park visitors during construction. The new road and other facilities will need to be maintained indefinitely for continued park access and visitor enjoyment. Park rangers are law enforcement officers and maintain vigilance for fire protection.

MITIGATION

Mitigation will be further defined in the EIR but is likely to include coordination with the City of Chino Hills and an emergency contingency plan in the event of an accident.

14. RECREATION.

ISSUES

Would the project:

a) Increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☒	☐	☐
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☒	☐	☐

COMMENTS:

Because the project will substantially improve access to Chino Hills State Park, it is anticipated that the park will have increased numbers of visitors. The project is proposed according to the Chino Hills General Plan with the goal of increasing safe access for the public and providing limited additional facilities.

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT

MITIGATION

All facilities would be constructed in accordance with the Chino Hills General Plan.

15. TRANSPORATION/TRAFFIC

ISSUES

Would the project:

a) Cause a substantial increase in traffic, in relation to existing traffic and the capacity of the street system (i.e., a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☐	☒	☐	☐
b) Exceed, individually or cumulatively, the level of service standards established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐
c) Cause a change in air traffic patterns, including either an increase in traffic levels or a change in location, that results in substantial safety risks?	☐	☐	☒	☐
d) Contain a design feature (e.g., sharp curves or a dangerous intersection) or incompatible uses (e.g., farm equipment) that would substantially increase hazards?	☐	☒	☐	☐
e) Result in inadequate emergency access?	☐	☒	☐	☐
f) Result in inadequate parking capacity?	☐	☒	☐	☐
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☒	☐

COMMENT

Although it is not anticipated that the project will cause a substantial increase in traffic in relation to the existing traffic or the capacity of the local streets, traffic counts have not yet been completed. The significance of this issue will be resolved in the EIR. The level of improvements allowed in the General Plan do not indicate that the park will have the facilities to support high levels of visitor use in the park interior, therefore, it is not anticipated that the Level of service standards for the local roads would be exceeded as a result of this project's construction and implementation. It is anticipated that the new entrance road will contain sharp curves that can be easily negotiated at the park speed limit of 15 mph. Large vehicles such as RV's, buses, and horse trailers will utilize the road but safety would be vastly increased with the project over the existing condition.

MITIGATION

Park operations will strive to ease traffic congestion at and along the entrance road and notify the public when parking is at capacity, as needed.

16. UTILITIES AND SERVICE SYSTEMS.

ISSUES

Would the project:

a) Exceed wastewater treatment restrictions or standards of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐

		POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
b)	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities?	☐	☐	☒	☐
	Would the construction of these facilities cause significant environmental effects?	☐	☐	☒	☐
c)	Require or result in the construction of new storm water drainage facilities or expansion of existing facilities?	☐	☐	☒	☐
	Would the construction of these facilities cause significant environmental effects?	☐	☐	☒	☐
d)	Have sufficient water supplies available to serve the project from existing entitlements and resources or are new or expanded entitlements needed?	☐	☐	☒	☐
e)	Result in a determination, by the wastewater treatment provider that serves or may serve the project, that it has adequate capacity to service the project's anticipated demand, in addition to the provider's existing commitments?	☐	☐	☒	☐
f)	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g)	Comply with federal, state, and local statutes and regulations as they relate to solid waste?	☐	☐	☒	☐

COMMENTS:

A small septic system would be installed at the entrance station and new utilities will be installed but the additional demand on existing utilities would be negligible due to the low number of users and reliance on native landscaping within the park. Limited storm water or drainage facilities would be constructed as part of the entrance road project.

MITIGATION

Avoidance or relocation of existing utility easements

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT

III. MANDATORY FINDINGS OF SIGNIFICANCE.

Would the project:

a)	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal?	☒	☐	☐	☐
b)	Have the potential to eliminate important examples of the major periods of California history or prehistory?	☐	☐	☒	☐
c)	Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means the incremental effects of a project are considerable when viewed in connection with the effects of past projects, other current projects, and probably future projects?)	☐	☐	☒	☐
d)	Have environmental effects that will cause substantial adverse effects on humans, either directly or indirectly?	☐	☐	☒	☐

COMMENTS:

The project is located within a Habitat Conservation Plan (HCP) area and extends along the existing entrance road corridor which contains riparian and wetland areas. It is anticipated that sensitive species utilize the wetland and riparian areas along both the existing road and the new road alignment. Although impacts to this area will be minimized, they cannot be avoided due to the steep topography and close proximity of the creek. The full extent and significance of the impacts to sensitive species, habitat, and wetlands will be detailed in the EIR and may drop to less than significant with mitigation but a worst case scenario may show the impacts as significant, even with mitigation. It is the intention of California State Parks to mitigate the adverse effects to these resources to the fullest extent feasible.

IV. PRELIMINARY DETERMINATION

On the basis of the Initial Study,

☐ I find that the proposed project could not have an adverse effect on the environment, and a NEGATIVE DECLARATION will be prepared.

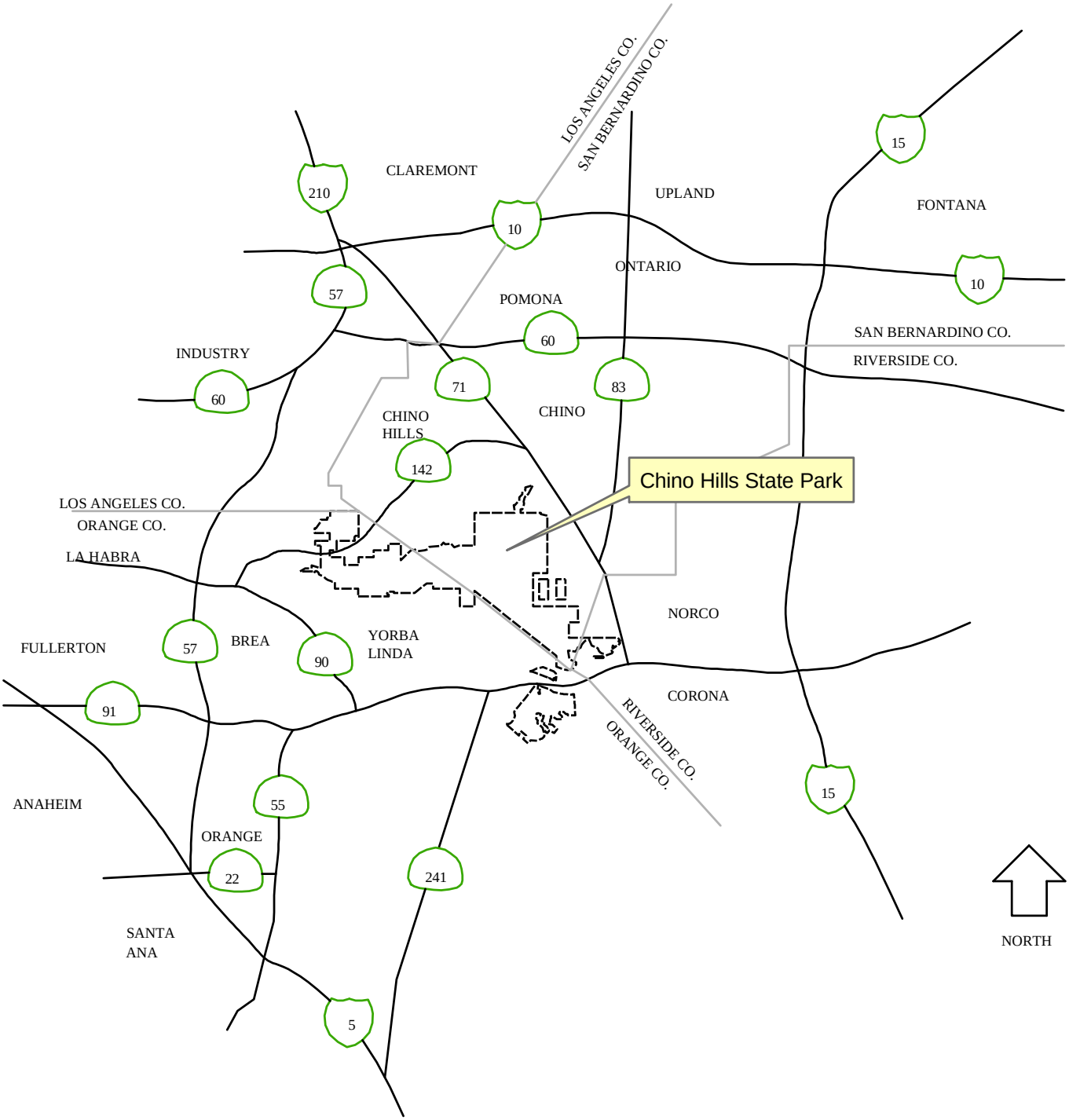
☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect because the mitigation measures described in the attached Mitigation appendix will be required. A NEGATIVE DECLARATION will be prepared.

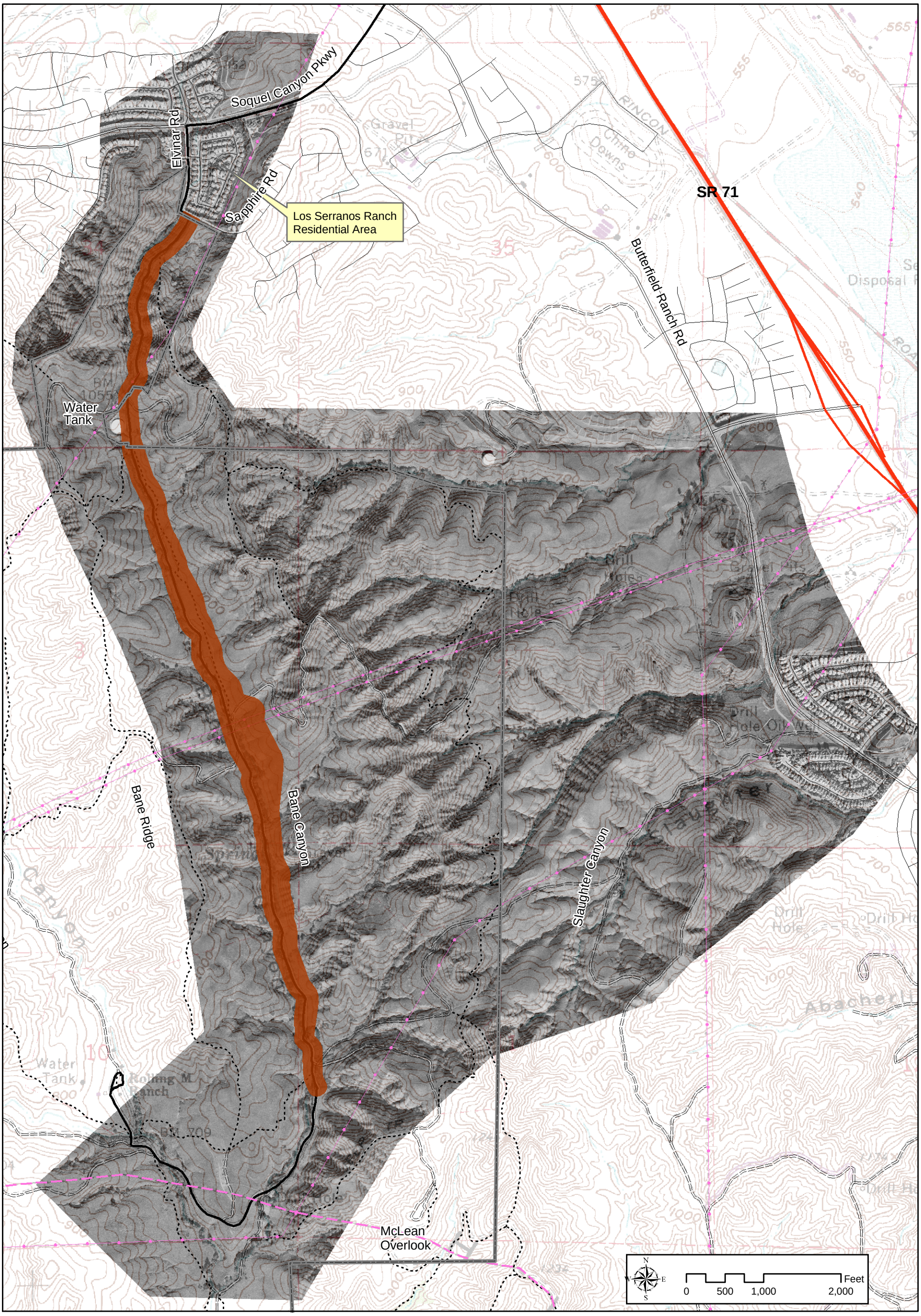
☒ I find the proposed project may have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

PREPARER: Tina Robinson

TITLE: Associate Park and Recreation Specialist DATE: 1/27/2004

Vicinity Map





Legend

- Park Boundary
- Work Area

Utility

Type

- GAS PIPELINE
- POWER TRANSMISSION LINE
- WATER PIPELINE

Routes

Type

- Primary Highway
- Highway
- On-ramp
- Main Entrance Road
- Paved Road
- Major Road
- Dirt Road
- Trail
- Rail Road

Proposed Entrance Road

Chino Hills State Park

STATE OF CALIFORNIA

Governor's Office of Planning and Research

State Clearinghouse and Planning Unit

Arnold
Schwarzenegger
Governor

Jan Boel
Acting Deputy
Director

Notice of Preparation

February 9, 2004

To: Reviewing Agencies

Re: Chino Hills State Park Entrance Road
SCH# 2004021037

Attached for your review and comment is the Notice of Preparation (NOP) for the Chino Hills State Park Entrance Road draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Tina Robinson
Department of Parks and Recreation
8885 Rio San Diego Drive
San Diego, CA 92108

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Terry Roberts
for Scott Morgan
Associate Planner, State Clearinghouse

Attachments
cc: Lead Agency

Document Details Report
State Clearinghouse Data Base

SCH# 2004021037
Project Title Chino Hills State Park Entrance Road
Lead Agency Parks and Recreation, Department of

Type NOP Notice of Preparation

Description This project would build a new improved two-lane road on the general alignment of the existing unimproved dirt entrance road (Bane Canyon Road) for a distance of approximately 2 miles. Construction would relocate the road onto a more favorable alignment, as feasible, and utilize retaini walls to reduce cut and fill slopes. The proposed project would also constructa multi-use trail, includ underground utilities, a trailhead, road drainage facilities, a park entrance station with utilities, a scen overlook, maintenancestorage area, a comfort station, erosion control measures, and minor intersection improvements.

Lead Agency Contact

Name Tina Robinson
Agency Department of Parks and Recreation
Phone 619-220-5300 **Fax**
email
Address 8885 Rio San Diego Drive
City San Diego **State** CA **Zip** 92108

Project Location

County San Bernardino
City Chino Hills
Region
Cross Streets < 0.5 mi south of Soquel Canyon Pkwy/Elinvar Rd/Sapphire Rd
Parcel No.
Township **Range** **Section** **Base**

Proximity to:

Highways
Airports
Railways
Waterways
Schools
Land Use State Park with northern terminus adjacent to residential

Project Issues Aesthetic/Visual; Air Quality; Archaeologic-Historic; Flood Plain/Flooding; Forest Land/Fire Hazard; Geologic/Seismic; Noise; Public Services; Recreation/Parks; Soil Erosion/Compaction/Grading; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Wildlife; Landuse; Cumulative Effects

Reviewing Agencies Resources Agency; Department of Forestry and Fire Protection; Department of Water Resources; Department of Fish and Game, Region 5; Department of General Services; Native American Herita Commission; California Highway Patrol; Caltrans, District 11; Regional Water Quality Control Boarc Region 9

Date Received 02/09/2004 **Start of Review** 02/09/2004 **End of Review** 03/09/2004

Note: Blanks in data fields result from insufficient information provided by lead agency.

NOP Distribution List

County: San Diego SCH# 2004021037

Resources Agency

- [x] **Resources Agency** Nadell Gayou
- [ ] **Dept. of Boating & Waterways** Suzi Betzler
- [ ] **California Coastal Commission** Elizabeth A. Fuchs
- [ ] **Colorado River Board** Gerald R. Zimmerman
- [ ] **Dept. of Conservation** Roseanne Taylor
- [ ] **California Energy Commission** Environmental Office
- [x] **Dept. of Forestry & Fire Protection** Allen Robertson
- [ ] **Office of Historic Preservation** Hans Kreutzberg
- [ ] **Dept of Parks & Recreation** B. Noah Tilghman Environmental Stewardship Section
- [ ] **Reclamation Board** Lori Buford
- [ ] **Santa Monica Mountains Conservancy** Paul Edelman
- [ ] **S.F. Bay Conservation & Dev't. Comm.** Steve McAdam
- [x] **Dept. of Water Resources** Resources Agency Nadell Gayou

Fish and Game

- [ ] **Dept. of Fish & Game** Scott Flint Environmental Services Division
- [ ] **Dept. of Fish & Game 1** Donald Koch Region 1
- [ ] **Dept. of Fish & Game 2** Banky Curtis Region 2
- [ ] **Dept. of Fish & Game 3** Robert Floerke Region 3
- [ ] **Dept. of Fish & Game 4** William Laudermilk Region 4
- [x] **Dept. of Fish & Game 5** Don Chadwick Region 5, Habitat Conservation Program
- [ ] **Dept. of Fish & Game 6** Gabrina Gatchel Region 6, Habitat Conservation Program
- [ ] **Dept. of Fish & Game 6 I/M** Tammy Allen Region 6, Inyo/Mono, Habitat Conservation Program
- [ ] **Dept. of Fish & Game M** George Isaac Marine Region

Other Departments

- [ ] **Food & Agriculture** Steve Shaffer Dept. of Food and Agriculture
- [x] **Dept. of General Services** Robert Sleppy Environmental Services Section
- [ ] **Dept. of Health Services** Wayne Hubbard Dept. of Health/Drinking Water

Independent Commissions,Boards

- [ ] **Delta Protection Commission** Debby Eddy
- [ ] **Office of Emergency Services** John Rowden, Manager
- [ ] **Governor's Office of Planning & Research** State Clearinghouse

_____

- [x] **Native American Heritage Comm.** Debbie Treadway

- [ ] **Public Utilities Commission** Ken Lewis
- [ ] **State Lands Commission** Jean Sarino
- [ ] **Tahoe Regional Planning Agency (TRPA)** Cherry Jacques

Business, Trans & Housing

- [ ] **Caltrans - Division of Aeronautics** Sandy Hesnard
- [ ] **Caltrans - Planning** Ron Helgeson
- [x] **California Highway Patrol** John Olejnik Office of Special Projects
- [ ] **Housing & Community Development** Cathy Creswell Housing Policy Division

Dept. of Transportation

- [ ] **Dept. of Transportation 1** Mike Eagan District 1
- [ ] **Dept. of Transportation 2** Don Anderson District 2
- [ ] **Dept. of Transportation 3** Jeff Pulverman District 3
- [ ] **Dept. of Transportation 4** Tim Sable District 4
- [ ] **Dept. of Transportation 5** David Murray District 5
- [ ] **Dept. of Transportation 6** Marc Birnbaum District 6
- [ ] **Dept. of Transportation 7** Stephen J. Buswell District 7
- [ ] **Dept. of Transportation 8** Linda Grimes, District 8
- [ ] **Dept. of Transportation 9** Gayle Rosander District 9
- [ ] **Dept. of Transportation 10** Tom Dumas District 10
- [x] **Dept. of Transportation 11** Bill Figge District 11
- [ ] **Dept. of Transportation 12** Bob Joseph District 12

Cal EPA

Air Resources Board

- [ ] Airport Projects Jim Lerner
- [ ] Transportation Projects Kurt Karperos
- [ ] Industrial Projects Mike Tollstrup

- [ ] **California Integrated Waste Management Board** Sue O'Leary
- [ ] **State Water Resources Control Board** Jim Hockenberry Division of Financial Assistance
- [ ] **State Water Resources Control Board** Student Intern, 401 Water Quality Certification Unit Division of Water Quality
- [ ] **State Water Resouces Control Board** Steven Herrera Division of Water Rights
- [ ] **Dept. of Toxic Substances Control** CEQA Tracking Center

Regional Water Quality Control Board (RWQCB)

- [ ] **RWQCB 1** Cathleen Hudson North Coast Region (1)
- [ ] **RWQCB 2** Environmental Document Coordinator San Francisco Bay Region (2)
- [ ] **RWQCB 3** Central Coast Region (3)
- [ ] **RWQCB 4** Jonathan Bishop Los Angeles Region (4)
- [ ] **RWQCB 5S** Central Valley Region (5)
  - [ ] **RWQCB 5F** Central Valley Region (5) Fresno Branch Office
  - [ ] **RWQCB 5R** Central Valley Region (5) Redding Branch Office
- [ ] **RWQCB 6** Lahontan Region (6)
  - [ ] **RWQCB 6V** Lahontan Region (6) Victorville Branch Office
- [ ] **RWQCB 7** Colorado River Basin Region (7)
- [ ] **RWQCB 8** Santa Ana Region (8)
- [x] **RWQCB 9** San Diego Region (9)

- [ ] Other _____

_____

_____

Last Updated on 01/12/04

CITY OF CHINO HILLS
2001 GRAND AVENUE
CHINO HILLS, CALIFORNIA 91709-4869
(909) 364-2600 • (909) 364-2695 FAX

February 19, 2004

Ms. Tina Robinson
Environmental Coordinator
California Department of Parks and Recreation
Southern Service Center
8885 Rio San Diego Drive, Suite 270
San Diego, California 92108

SUBJECT: CHINO HILLS STATE PARK ENTRANCE ROAD
COMMENTS ON NOTICE OF PREPARATION

Dear Ms. Robinson:

The City of Chino Hills appreciates the opportunity to comment on the Notice of Preparation prepared for the proposed Chino Hills State Park Entrance Road. The following comments outline the City's concerns and recommendations relative to the proposed environmental impact report (EIR) as well as reemphasize the prior discussions between the State and the City Council with regard to the alternative roadway alignments discussed in 2002.

Specifically, at the November 12, 2002 City Council meeting, the City Council reviewed three roadway alternatives being studied by the State Department of Parks and Recreation. At that meeting, the Council voted to support the Slaughter Canyon roadway alternative as their first choice, as it provided very good access into the park while not channeling traffic through an existing residential neighborhood. The Borba alternative was their second choice and, the Bane Canyon alternative was their third choice. The City Council's position has not changed in this regard and the City continues to recommend that the entrance road into the park should take access from Butterfield Ranch Road through Slaughter Canyon rather than widening the existing Bane Canyon roadway.

The State's decision to move forward with an EIR for the Bane Canyon alignment concerns the City due to the roadway's proximity to a residential neighborhood. The City believes that this neighborhood will be impacted by the increased use of this roadway.

The City is in the process of discussing the Slaughter Canyon alignment with the Lamb family, as the City believes that this is the logical location for an all weather entrance road for the park.

In response to the NOP, the City of Chino Hills would like to offer the following comments relative to the preparation of the EIR for the proposed roadway project:

1. The EIR needs to assess the Slaughter Canyon and Borba roadway alignments as alternatives to the proposed Bane Canyon alignment.

2. The EIR needs to address potential impacts of the proposed roadway project as it relates to the generation of additional traffic on Elinvar Drive and Sapphire Road. Specifically, the EIR must:

    a. Assess the potential for impacts on traffic safety.
    b. Quantify the amount of additional traffic and impacts on the roadway system and at intersections within the vicinity.
    c. Assess the potential for speed related impacts within vicinity.
    d. Assess the potential for increased noise impacts on adjacent residents generated by construction activity and by the additional traffic accessing the new roadway.
    e. Assess the potential increased demand on public safety services due to the increased use of the park due to the new roadway and the maintenance impact on public roadways leading to the entrance to the park.
    f. Assess the hours of park road usage given the fact that the park will have more campsites.
    g. Assess the impact of the potential increase in emergency vehicles that may access the park to provide aid to the increased number of park users.

3. The EIR needs to quantify and assess the amount of cut and fill required as part of the grading operation for the roadway. If soil export is required for the proposed project, the EIR must assess the amount of soil to be removed, the number of truck trips required to move the soil, the haul route to be used, and the impact on air quality, noise, traffic within the surrounding residential neighborhood.

4. The EIR needs to assess potential impacts from vehicle parking impacts on Sapphire Road and Elinvar Drive. Current park users park on these roadways, as they do not wish to pay the park entrance fee. These park users include equestrian park users, bicyclists, and hikers. These park users park their cars, trucks, and horse trailers on the street for hours at a time and leave behind a large amount of trash and horse manure on the street. The City is concerned that this roadway project will increase the desire to use the park in that there will now be an "inviting" separate trail for these people to use. In addition, it may be more enticing for persons to ride their bicycles on the new

paved roadway. The EIR must address the potential impact on the street and provide mitigation for residents living in the vicinity.

5. The EIR needs to assess how the proposed roadway project will protect the City's water reservoir located adjacent to the Park entrance road. This includes measures to protect the reservoir and water line during construction and after the roadway has been completed.

6. The EIR must assess the potential visual impacts created by the proposed use of retaining walls at the north end of the road, near Sapphire Road. Measures for mitigating the visual appearance of these large walls need to be fully addressed.

7. The EIR needs to include a geotechnical study of soil conditions to assure that the roadway and retaining walls can be built without further impact on the environment than proposed.

8. The EIR needs to assess potential impacts associated with the project's construction, including but not limited to:

    a. Construction noise
    b. Hours of construction, equipment maintenance, and construction move on
    c. Construction traffic control, including truck traffic, worker traffic, and construction move-in traffic
    d. Public access to the park during construction

9. The EIR needs to identify the location and assess the potential impact of construction staging areas for the proposed project.

10. The EIR needs to address the potential impact of SCE locating new electrical lines through the Bane Canyon power line easement and its relationship to the proposed project.

Thank you again for the opportunity to provide comments on the proposed environmental document. If you have any questions regarding these comments, please feel free to contact me at (909) 364-2741.

Sincerely,

Jeffrey W. Collier
Community Development Director

cc: Mayor and City Council
Douglas N. La Belle, City Manager
Mary McDuffee, City Clerk
Senator Bob Margett, 29th District
Assemblyman Bob Pacheco, 60th District
Jim Starkey

SOUTHERN CALIFORNIA

ASSOCIATION of GOVERNMENTS

Main Office

818 West Seventh Street

12th Floor

Los Angeles, California

90017-3435

t (213) 236-1800

f (213) 236-1825

www.scag.ca.gov

February 19, 2004

Ms. Tina Robinson, Environmental Coordinator
California Department of Parks and Recreation
Southerb Service Center
8885 Rio San Diego Drive, Suite 270
San Diego, CA 92108

RE: SCAG Clearinghouse No. I 20040078 Chino Hills State Park Entrance Road

Dear Ms. Robinson:

Thank you for submitting the **Chino Hills State Park Entrance Road** for review and comment. As areawide clearinghouse for regionally significant projects, SCAG reviews the consistency of local plans, projects and programs with regional plans. This activity is based on SCAG's responsibilities as a regional planning organization pursuant to state and federal laws and regulations. Guidance provided by these reviews is intended to assist local agencies and project sponsors to take actions that contribute to the attainment of regional goals and policies.

We have reviewed the **Chino Hills State Park Entrance Road**, and have determined that the proposed Project is not regionally significant per SCAG Intergovernmental Review (IGR) Criteria and California Environmental Quality Act (CEQA) Guidelines (Section 15206). Therefore, the proposed Project does not warrant comments at this time. Should there be a change in the scope of the proposed Project, we would appreciate the opportunity to review and comment at that time.

A description of the proposed Project was published in SCAG's **February 1-15, 2004** Intergovernmental Review Clearinghouse Report for public review and comment.

The project title and SCAG Clearinghouse number should be used in all correspondence with SCAG concerning this Project. Correspondence should be sent to the attention of the Clearinghouse Coordinator. If you have any questions, please contact me at (213) 236-1867. Thank you.

Sincerely,

JEFFREY M. SMITH, AICP
Senior Regional Planner
Intergovernmental Review

Attn: Tina Robinson, Environmental Coord.
California Dept. of Parks and Recreation
Southern Service Center
8885 Rio San Diego Drive, Suite 270
San Diego, CA 92108

I was unable to attend the Public Information Meeting recently held for the above mentioned project but have serious concerns relative to traffic, public safety and trash if the proposed improvements are made to the Sapphire Road entrance. These issues are of concern to myself and neighboring residents and we would like to have them addressed in the EIR.

It was our understanding that originally a more accessible entrance was planned off of Pine Avenue and we would like to see that pursued further. If negotiations with the land owner prove unsuccessful we feel the impact of increased vehicular traffic and park visitors, will be detrimental to our neighborhood and will create serious public safety and environmental issues.

The intersection of Elinvar and Soquel Canyon already has had numerous accidents with the existing traffic flow. The traffic light which has been there approximately 5 years has not improved the accident rate. Additionally, there is alot of pedestrian and bike traffic traveling both to the park as well as children attending Wickman Elementary less than a mile away on a year round schedule. Traffic on Soquel Canyon is dangerous now with the 50 mph speed limit. To increase the number of cars would only worsen the situation.

I live off of Vista Court which is one of only three streets that connect to Elinvar Drive southbound as you approach the entrance to the State Park. The others are Sunstone and Moonstone respectively. Each of these streets serves as the only entrance/exit to their neighborhoods - a cul-de-sac and a circular neighbor. If the proposed improvements are made it will be very difficult and dangerous to enter/exit our streets with increased cross traffic.

Another serious concern is public safety. We have lived in this area for 7 years and as the area has grown so has the problem of non-residents using the deadend of Elinvar to park and party. There have been numerous nuisance calls and an increase in non-residents loitering in the area. There are no regular patrols and with increased traffic we forsee an increase in public safety concerns both outside the park and within the park.

In conjunction with the increase in traffic we would see an increase in trash left behind. It is a problem now and would only worsen with an increase in vehicular traffic and visitors to the park thru this entrance.

We would appreciate your consideration of our concerns and would hope that upon further review, the original plan for an alternate entrance off of Butterfield Ranch Road would be investigated and pursued successfully.

Sincerely,
Jennifer Barkley

DRAFT

BIOLOGICAL RESOURCES TECHNICAL REPORT
CHINO HILLS STATE PARK ENTRANCE ROAD

DEPARTMENT OF PARKS AND RECREATION, INLAND EMPIRE DISTRICT, SAN BERNARDINO COUNTY, CALIFORNIA

Prepared by:
The Southern Service Center
California Department of Parks and Recreation
8885 Rio San Diego Drive, #270
San Diego, CA 92108

Contact: Elizabeth Hubert
Telephone: (831) 657-6305
E-mail Address: ehubert@parks.ca.gov

August, 2004

TABLE OF CONTENTS

APPENDICES

LIST OF TABLES

SUMMARY OF FINDINGS

The proposed Chino Hills State Park Entrance Road project is located within the first (northernmost) two miles of the current primitive entrance road in Bane Canyon off Elinvar Road in Chino Hills, California. The project will directly impact approximately 12 acres within Bane Canyon. The project area is located within Chino Hills State Park in San Bernardino County, California.

This document presents the results of focused biological surveys of the site conducted by staff from the California Department of Parks and Recreation Southern Service Center. Surveys conducted by Southern Service Center staff and staff from the Inventory, Monitoring, and Assessment Program in Sacramento also informed this report. In addition, biological surveys and a feasibility study were completed by Psomas in 2002. In this technical report, potential effects of the proposed project are analyzed along with their potential impacts to sensitive biological resources at the site. The project is also evaluated for its consistency with regional conservation plans and the Chino Hills State Park General Plan (1999).

This project would require the preparation of a California Environmental Quality Act (CEQA) Environmental Impact Report (EIR). Required permits include a Section 1602 Streambed Alteration Agreement from the California Department of Fish and Game, and a Clean Water Act Section 401 Water Quality Permit from the Regional Water Quality Control Board. A Nationwide Permit under Section 404 of the Clean Water Act should be obtained from the U.S. Army Corps of Engineers (ACOE). Compliance with the Federal and California Endangered Species Acts is required for this project. Consultations have been initiated informally with the U.S. Fish and Wildlife Service (Bianchi 2004, USFWS 2004), and it appears that recommended avoidance measures would be considered sufficient to protect federally listed species including the Least Bell's Vireo and southwestern willow flycatcher. If modifications to the project footprint or timing of construction would cause direct impacts to these species, a formal consultation under Section 7 of the Endangered Species Act (ESA) would be required. Compliance with the Federal Migratory Bird Treaty Act is also required; this international treaty protects migratory nongame native bird species.

The proposed entrance road is approximately 1.9 miles long. The biological study area included the proposed road and all suitable habitat within 150 feet of the proposed road. Seven vegetation communities were identified in the 143-acre project study area. These include southern willow scrub (10.58 acres), southern cottonwood-sycamore riparian forest (5.41 acres), mulefat scrub (2.11 acres) coastal sage scrub (7.43 acres) and tamarisk scrub (0.25 acres). In addition, approximately 105.64 acres of weedy nonnative annual grassland, and 7.55 acres of disturbed or developed land are included within the study area.

The proposed project impact area includes several natural communities which are considered sensitive by the CNDDB (2004), or regional conservation plans. These

vegetation types may support a number of sensitive wildlife species. Sensitive vegetation types within the project area include willow scrub and sycamore riparian forest. Vegetation associated with wetlands or riparian areas may also be considered sensitive. In addition, coastal sage scrub is another sensitive vegetation type which is protected by several regional conservation plans in southern California.

Some potential habitat exists in Bane Canyon for the state and federally endangered Least Bell's vireo, southwest willow flycatcher (federal endangered), yellow warbler (California species of special concern), and yellow-breasted chat (California species of special concern) and grassland habitat supports grasshopper sparrow (FWS Migratory nongame management concern). The project area also supports raptors and owls that may nest in the project area, including the Cooper's hawk (California species of special concern), white-tailed kite (Federal species of concern), and long-eared owl (California species of special concern). The project area may also support a number of migratory bird species, which although not listed specifically by state or federal agencies, are also protected under the Federal Migratory Nongame Bird Treaty Act. Western spadefoot toads (California species of special concern) were also found in the study area. Several sensitive bat species may also be found foraging and roosting in the Bane Canyon project area; these include the Yuma myotis and pocketed free-tailed bat. No sensitive plants are expected to occur within the project area.

The project design has been adjusted to avoid direct impact to sensitive species, however both permanent and temporary impacts to habitat are expected as a result of this project. The proposed project would result in direct impacts to 0.17 acres of willow scrub and sycamore woodlands, 0.87 acres to coastal sage scrub, and 0.15 acres of mulefat scrub, 8.78 acres of impact within weedy annual grassland, and 1.59 acres of disturbed or developed land. Additionally, nearly one-quarter of an acre (0.23 acre) of ACOE wetlands, and an additional 0.07 acres of riparian zones under the jurisdiction of CDFG would also be impacted.

It is expected that avoidance measures will be sufficient to avoid direct impacts to all sensitive wildlife species. No impacts are expected to sensitive plants, since none were found in the proposed project area. Sensitive habitats will be affected by the project, but impacts will be minimized to the greatest extent possible, and onsite compensatory mitigation is proposed for impacts to riparian and wetland vegetation. The project was designed to avoid impacts to the most sensitive riparian habitats to the greatest extent possible, and most impacts will occur in weedy non-native annual grassland. Further avoidance measures include minimization of grading and the use of BMP's to avoid soil erosion and to protect sensitive habitats, providing a buffer around wetland habitats, and restricting vehicle traffic during the rainy season to protect the western spadefoot. Vegetation clearing and will occur outside of the breeding season to protect nesting habitat for birds, and construction near the most sensitive habitats will occur outside of the nesting season. No mature riparian vegetation, such as sycamores which provide high habitat value and nesting habitat, will be removed. Biological monitors will be onsite and potential nesting habitat will be surveyed prior to construction. Where

sensitive habitats are removed, vegetation will be restored at the project site in appropriate ratios.

These avoidance, minimization and mitigation measures proposed for the project would reduce impacts to a less than significant level. The project will be consistent with DPR resource management objectives, with the existing park General Plan (1999), and will not adversely affect regional biological resource conservation efforts.

1.0 INTRODUCTION

The proposed Bane Canyon project area in Chino Hills Entrance Road project occupies 12 acres within the northeast portion of Chino Hills State Park (CHSP) in San Bernardino County, California. The project involves the construction of 1.9 miles of entrance road, and an associated recreational trail. The total direct impact area would be approximately 12 acres, and the temporary impact area would be approximately 0.5 acres.

An unpaved access road currently exists in Bane Canyon near the bottom of the canyon. The proposed road would include a 32-foot width (lanes and shoulders). The existing unpaved access road would be converted into a multi-purpose trail for cyclists, pedestrians, and equestrians. The new proposed road would follow Bane Canyon and would be primarily located on the eastern side of the canyon above the riparian zone. Retaining walls are anticipated along the project alignment, and they would range from 4 feet to over 22 feet high. The majority of the retaining wall would be at the start of the road, in the northernmost section. The maximum road grade would be 12%. A total of 6 bridges will be necessary at various locations along the new entrance road in order to traverse adjoining canyons and also Bane Canyon Creek itself. One large culvert will be removed and replaced with a bridge on the existing primitive roadbed.

This project would require the preparation of a California Environmental Quality Act (CEQA) Environmental Impact Report (EIR). Required permits would include a Section 1602 Streambed Alteration Agreement from the California Department of Fish and Game, and a Clean Water Act Section 401 Water Quality Permit from the Regional Water Quality Control Board. A Nationwide Permit under Section 404 of the Clean Water Act should be obtained from the U.S. Army Corps of Engineers (ACOE). Informal consultations have been initiated with the U.S. Fish and Wildlife Service (Bianchi 2004, USFWS 2004), and it appears that recommended avoidance measures would be considered sufficient to protect federally listed species including the Least Bell's Vireo and southwestern willow flycatcher. If modifications to the project footprint or timing of construction would cause direct impacts to this species, a formal consultation under Section 7 of the Endangered Species Act (ESA) would be required. Compliance with the Federal Migratory Bird Treaty Act is also required; this international treaty protects migratory nongame native bird species.

The purpose of this report is to describe the biological characteristics of the site, including the flora, fauna, wildlife and habitats, analyze the biological significance of the site, address the impacts to sensitive resources under federal, state, and regional laws or policies, and to analyze the directs effects of the proposed project. This report provides the results of project-level biological surveys conducted by CSP staff, and a Psomas feasibility report. It analyzes the significance of the biological resources on the site and the direct and indirect impacts of the proposed project, and the effects of proposed avoidance and mitigation measures.

2.0 METHODS AND SURVEY LIMITATIONS

Information concerning biological resources in the proposed project area was collected through literature review, examination of biological databases, and conducting field studies.

2.1 Literature Review

The following sources were consulted regarding sensitive biological resources in the project area: U.S. Fish and Wildlife Service (2004), California Natural Diversity Database (CNDDB 2004), California Native Plant Society Inventory of Rate and Endangered Vascular Plants (CNPS 2004, Tibor 2001), a Draft Concept Report and Feasibility Study (Psomas 2002), reports from DPR Inventory, Monitoring, and Assessment Program (DPR 2002) and the Chino Hills State Park General Plan (1999). There are no regional conservation plans which directly affect the project area, however, several nearby regional plans address special-status species and local conservation guidelines which were consulted while preparing this report. These include the Riverside County Multiple Species Habitat Conservation Plan (Dudek and Associates, Inc. 2003), and California Department of Fish and Game Natural Community Conservation Planning coastal sage scrub guidelines (DFG 2004).

2.2 Field Reconnaissance and Resource Mapping

Species- specific field surveys of the project impact area were conducted by Darren Smith, Karen Miner, Chris Peregrin, and Diona Roja in 2003. In addition, surveys were conducted under the DPR Inventory, Monitoring, and Assessment Program in 2001 and 2002 by DPR Southern Service Center staff. Field studies were also conducted by Psomas (2002), but these did not include species-specific surveys. Surveys were conducted on foot and the entire proposed project area was surveyed and inventoried for biological resources. Vegetation communities were mapped in the field (Psomas 2002) along the proposed project alignment, and further surveys were conducted in the field by DPR staff; mapping was conducted using a 2001 aerial photograph at 1" = 100' scale. Vegetation boundaries and locations of sensitive species were digitized onto aerial photographs using ArcMap 8.2 GIS software. Vegetation acreages and impacts were also calculated using ArcMap GIS. Locations of sensitive species were recorded using a global positioning system (GPS). Survey dates are detailed in Table 1.

Table 1. Field surveys and personnel.

Survey	Date(s)	Ecologist(s)
Vegetation mapping	4/10/02, 4/28/02, 5/3/02 11/18/03 to 11/21/03	Psomas (2002) D. Smith
Sensitive plant surveys	5/2003	D. Smith
Wetland delineation	11/18/03 to 11/21/03	D. Smith, E. Hubert
Least Bell's vireo	1/11/03, 4/24/03, 5/6/03, 5/22/03, 6/18/03, 7/3/03, 7/9/03, 7/16/03	K. Miner, D. Roja, D. Smith
Southwestern willow flycatcher	5/22/03, 6/18/03, 7/3/03, 7/9/03, 7/16/03	K. Miner, D.Smith
Western spadefoot toad	3/2/04, 4/3/04	C. Peregrin

2.3 Flora and Fauna

Plants observed during field surveys were recorded (see Appendix B). Latin and common plant names follow the Jepson Manual (Hickman 1993). Vegetation descriptions follow Holland (1986), with synonyms provided from the Manual of California Vegetation (Sawyer and Keeler-Wolf 1995). Wildlife encountered during field surveys were identified and recorded. Wildlife species observed during the study are listed in Appendix C.

2.4 Sensitive Biological Resources

Special-status biological resources include animals and plants that have been given special recognition by federal, state, or local resource agencies and organizations because of limited, declining, or threatened population sizes. Habitats, including wildlife corridors and habitat linkages that are of relatively limited distribution or are of particular value to wildlife are also included. All sensitive biological resources observed during surveys were recorded and their locations were mapped. Sensitive species potentially occurring within the project area are listed in Appendix D.

2.5 Survey Limitations

Surveys were conducted during the day in order to detect plants and diurnal wildlife, and to map vegetation and wetlands. Nightime surveys were conducted for western spadefoot toads. Daylight surveys maximize opportunities for finding plant species and most bird species.

3.0 SITE PHYSICAL CHARACTERISTICS

3.1 Site Description

The proposed Chino Hills Entrance Road project is located at the Bane Canyon entrance to Chino Hills State Park (CHSP), in the northeastern portion of the park. Currently, an unpaved road provides access to a primitive campground, the Rolling M Ranch area, and Aliso Canyon. Chino Hills State Park is included within the Prado Dam and Yorba Linda 7.5-minute USGS quadrangles, and the northeastern section of the Park and Bane Canyon is located entirely within the Prado Dam 7.5-minute quadrangle. The biological study area includes the proposed road alignment in Bane Canyon with an additional 150-foot buffer zone. The proposed road is approximately 1.9 miles in length.

This area is mostly undeveloped and consists of several vegetation communities. The proposed road biological study area primarily consists of rolling hills dominated by nonnative weedy annual grassland, isolated patches of coastal sage scrub, and willow-sycamore riparian zones at the canyon bottom. The grasslands have been formerly grazed. Unvegetated developed areas onsite consist of the unpaved park road and associated structures, including a small kiosk and a water tank. Several foot trails also connect to the unpaved Bane Canyon road. Good quality riparian habitat is found in the southern portion of the proposed road area. Bane Canyon provides access to high-quality wildlife habitat areas at the Rolling M Ranch and Aliso Canyon.

The proposed project area is found mostly in the grassy hills above Bane Canyon creek. Bane Canyon and the proposed road alignment is oriented north-south, and the majority of the new road construction would be on west-facing slope. The initial (northern) section of the road is on fairly steep slopes above the riparian zone. The southern portion of the road descends in closer proximity to the riparian bottom, and the road is situated on more gently sloping west-facing hills. Elevations range from approximately 800 to 1000 feet above sea level.

4.0 RESULTS OF SURVEY

4.1 Plant Communities

Five native plant communities and two non-native vegetation types were identified within the project study area (Table 2). The vegetation types are shown in Appendix A, Figures 1 and 2.

Table 2. Vegetation Type and Area

Vegetation type (Holland)	Manual of California Vegetation Series	Acres
Coastal sage scrub	California sagebrush or California buckwheat	7.43
Southern willow scrub	Arroyo willow or Mixed willow	10.58
Sycamore woodland	California sycamore	5.41
Elderberry savanna	Mexican elderberry	0.12
Mulefat scrub	Mulefat scrub	2.11
Tamarisk scrub	Tamarisk	0.25
Non-native annual grassland	California annual grassland	105.64
Developed or barren land		7.55

The proposed project area includes seven different vegetation communities (Holland 1986, Sawyer and Keeler-Wolf 1995). Vegetation types present in the proposed project area include southern willow scrub, sycamore woodland, tamarisk scrub, mulefat scrub, and Mexican elderberry along Bane Canyon Creek. In addition, patches of coastal sage scrub vegetation are found on hills, and non-native annual grassland occupies the majority of the project zone away from Bane Canyon Creek. Developed areas within the proposed project zone include Bane Canyon road and other park infrastructure. Coastal sage scrub, southern willow scrub, and sycamore woodland communities are considered sensitive and worthy of protection by the California Natural Diversity Database (2004) and regional conservation plans, in part due to rapid habitat loss in the region. Natural communities found in the proposed Bane Canyon project area are described below (Smith 2003).

Coastal sage scrub

Coastal sage scrub occurs in small patches on hills within the project area. These patches are composed of monotypic stands of California buckwheat (*Eriogonum fasciculatum*) or coastal sagebrush (*Artemisia californica*). Some stands were mixed and contained both natives and exotics, including telegraph weed (*Heterotheca grandiflora)*, tocalote (*Centaurea melitensis)*, California poppy *(Eschscholzia californica)*, fascicled tarplant *(Deinandra fasciculata)*, ripgut grass (*Bromus diandrus)*, wild oat (*Avena barbata)*, and twiggy wreath plant (*Stephanomeria virgata*).

Coastal sage scrub has declined rapidly in southern California due to increased urbanization and development. This vegetation community is designated for protection

through several regional plans in southern California (DFG 2004). Coastal sage scrub may support a number of important species, especially the Federally threatened coastal California gnatcatcher, and the western spadefoot toad (California species of special concern). This plant community is known for high plant and animal species diversity. However, the stands in Bane Canyon are generally small and patchy and do not provide high wildlife value.

Southern willow scrub

In the project area, southern willow scrub is composed of black willow (*Salix gooddingii var. gooddingii*), arroyo willow (*Salix lasiolepis*), and mixed stands including red willow (*S. laevigata*). Narrow-leaf willow (*Salix exigua)* is also present. The understory consists of of mulefat (*Baccharis salicifolia*), milk thistle (*Silybum marianum*), poison hemlock (*Conium maculatum*), and California mugwort (*Artemisia douglasiana*).

Riparian habitat is uncommon in southern California and has declined more than 90% due to development, agriculture, and urbanization (Miner and Smith 2002). This vegetation community provides rich habitat for wildlife nesting, foraging, and cover. In the southern California region, southern willow scrub supports the federally endangered southwestern willow flycatcher, willow flycatcher (state endangered) and least Bell's vireo (federal and state endangered). In Bane Canyon, willow scrub occurs in a narrow area along the length of the project area. Southern willow scrub supports a number of reptiles, amphibians, birds, and mammals in Bane Canyon. Highest quality riparian habitat occurs at the southern portion of the proposed road project area.

In Bane Canyon, impacts to riparian zones including willow scrub vegetation would be included under the jurisdiction of the California Department of Fish and Game Streambed Alteration Agreement (Section 1602). Selected areas may also be considered wetlands under the jurisdiction of the Army Corps of Engineers (ACOE).

Sycamore woodlands

Sycamore woodlands in the project area contain moderately dense stands of sycamore (*Platanus racemosa*), with sparse cover of black willow, arroyo willow, and mulefat. Native and exotic understory species include ripgut grass (*Bromus diandrus)*, mugwort (*Artemisia douglasiana)*, poison hemlock *(Conium maculatum)*, black mustard (*Brassica nigra)* and willow herb (*Epilobium ciliatum*).

Sycamore woodlands are dominated by mature sycamore trees. These provide important refuges and perching and nesting habitat for a variety of wildlife species. In Chino Hills State Park, sycamore tree seedlings are uncommon, partially due to competition from non-native grasses and herbs (DPR 1999).

Portions of the sycamore woodlands in Bane Canyon are considered wetlands under the jurisdiction of the ACOE. Some sections will also be included under the jurisdiction of the DFG Streambed Alteration Agreement.

Mexican elderberry
Stands that were composed of individual or clustered Mexican elderberry (*Sambucus mexicana*) trees were mapped separately.

Mulefat scrub
Mulefat scrub consisted of mulefat (*Baccharis salicifolia*) and associated species including California mugwort (*Artemisia douglasiana*) and rushes (*Juncus sp.*) This vegetation type was mapped separately where mulefat was dominant. Mulefat may also be found in the understory associated with willow scrub. Mulefat-dominated areas are typically associated with wetland habitat types. In Bane Canyon, these would be considered wetlands under the jurisdiction of the ACOE or DFG Streambed Alteration Agreement.

Tamarisk scrub
Tamarisk scrub consisted primarily of monotypic stands of saltcedar (*Tamarix ramosissima*) near the bottom of Bane Canyon. Little or no understory is associated with this vegetation community. Tamarisk occurs in scattered narrow clumps primarily at the start (north end) of Bane Canyon and proposed project area.

Nonnative annual grassland
Nonnative annual grassland vegetation occurs in nearly all the Bane Canyon area excepting the riparian corridors along Bane Canyon Creek, and occupies the majority of the project area. Annual grasslands here are composed of both exotic weedy dicots and European annual grasses. Black mustard (*Brassica nigra*), fascicled tarplant (*Deinandra fasciculata*), tocalote (*Centaurea melitensis*) and Italian thistle (*Carduus pyncnocephalus*) dominate much of this vegetation. In addition, ripgut grass (*Bromus diandrus*), wild oat (*Avena fatua*), and other non-native annual grasses are commonly found. Native forbs such as California poppy (*Eschscholzia californica*), blue dicks (*Dichelostemma capitata*), and telegraph weed (*Heterotheca grandiflora*) may also be found scattered in the project area.

Grasslands may support a number of wildlife species. In the project area, annual grassland may support several ground-nesting bird species including the grasshopper sparrow.

Developed areas
Developed areas in the project zone include the unpaved Bane Canyon road, and park infrastructure including a water tank and a small kiosk near the north end of Bane Canyon.

4.2 Wildlife

Birds

Forty-nine bird species were observed during surveys in Bane Canyon (Appendix C). Sixteen sensitive bird species have potential habitat within the project area (Appendix D). Surveys were focused on sensitive habitats and were conducted primarily in riparian vegetation near Bane Canyon Creek and in the patchy coastal sage scrub vegetation within the canyon. Surveys conducted according to USFWS protocol were conducted for the least Bell's vireo and southwestern willow flycatcher (Smith 2003). Field surveys were also conducted under the DPR Inventory, Monitoring, and Assessment Program in 2001 (DPR 2002).

Reptiles and Amphibians

Eight species of reptiles and amphibians were observed within the project area: western fence lizard (*Sceloporus occidentalis),* side-blotched lizard (*Uta stansburiana)*, southern alligator lizard (*Gerrhonotus multicarinatus)*, western rattlesnake (*Crotalus viridis)*, gopher snake *(Pituophis melanoleucus)*. Amphibians found at the project site include western toads (*Bufo boreas),* Pacific treefrogs (*Hyla regilla)* and western spadefoot toad (*Spea hammondii)*. The western spadefoot is a federal species of concern and a California species of special concern.

Mammals

A total of sixteen mammal species were observed in the project area. These include the California ground squirrel (*Spermophilus beecheyi),* brush rabbit (*Sylvilagus bachmani*), bobcat (*Lynx rufus*), mule deer (*Odocoileus hemionus),* coyote (*Canis latrans),* Botta's pocket gopher (*Thomomys bottae)* striped skunk (*Mephitis mephitis)* common raccoon (*Procyon lotor),* the Virginia opossum (*Didelphis virginiana)* and mountain lion *(Felis concolor)*.

Six species of bats were detected in Bane Canyon using Anabat recordings (Miner 2002). These include the big brown bat (*Eptesicus fuscus*), western red bat (*Lasiurus blossevilli*), hoary bat (*Lasiurus cinereus*), Yuma myotis (*Myotis yumanensis*), Brazilian free-tailed bat (*Tadarida brasiliensis*) and pocketed free-tailed bat (*Nyctinomops femorosaccus*).

4.3 Sensitive Biological Resources

Sensitive or special-status biological resources include animals and plants that have been given special recognition by federal, state, or local resource agencies and organizations. Habitats that are of relatively limited distribution or are of particular value to wildlife are also included. Sources used to determine the current state and federal status of these resources are:

Plants - CDFG (2004), CNDDB (2004) USFWS (2004) and California Native Plant Society (2004)
Wildlife - CDFG (2004), CNDDB (2004) USFWS (2004)
Habitats - CNDDB (2004)

Sensitive Plant Species

No sensitive plant species were identified within the project area during focused and general surveys. Limited potential exists for seven sensitive plant species within the project area (Table 3). None of these were found during surveys in Bane Canyon, however.

Seven special-status plant species are listed by the California Natural Diversity Database (CNDDB 2004) and California Native Plant Society's (CNPS) Inventory of Rare and Endangered Plants of California (2001) as occurring on the Prado Dam 7.5-minute USGS quadrangle. These are: the chaparral sand-verbena (*Abronia villosa* var. *aurita*), Coulter's saltbush (*Atriplex coulteri*), Salt Spring checkerbloom (*Sidalcea neomexicana*), Santa Ana River woolystar (*Eriastrum densifolium* ssp. *sanctorum*), intermediate Mariposa lily (*Calochortus weedii* var. *intermedius*), Catalina Mariposa lily (*Calochortus catalinae*) and the many-stemmed dudleya (*Dudleya multicaulis*). Of these, only the many-stemmed dudleya, intermediate Mariposa lily, Catalina Mariposa lily and chaparral sand-verbena have limited potential to occur in the project area (DPR 2002, Psomas 2002).

Catalina Mariposa lily (*Calochortus catalinae*)**.** Catalina Mariposa lily is a CNPS List 4 (plants of limited distribution; watch list) herb that has been found in Slaughter canyon and on Bane Canyon Ridge. There is no potential for the project to impact this species in the proposed Bane Canyon project area.

Chaparral sand-verbena (*Abronia villosa* var. *aurita*)**.** The chaparral sand-verbena (CNPS List 1B) occurs in Santa Ana Canyon, and favors coastal sage scrub with open sandy soils. While there is a limited amount of marginally suitable habitat within the proposed project area, this plant has never been found there. The project would have no potential to impact this species.

Table 3. Sensitive Plant Species Potentially Occurring Within the Area of Potential Effect (APE)

Species	Status	Habitat	Habitat Presence	Species Presence	Status at CHSP
Chaparral sand-verbena *Abronia villosa* var. *aurita*	Fed: none State: none CNPS List1B	Coastal sage scrub on open sandy soil	P	A	Moderate potential habitat, however has never been found in project area.
Coulter's saltbush *Atriplex coulteri*	Fed: none State: none CNPS List1B	Alkaline or clay microhabitat	A	A	No appropriate microhabitat onsite
Intermediate mariposa lily *Calochortus weedii* var. *intermedius*	Fed: none State: none CNPS List1B	Annual grasslands	P	A	Potential to occur within annual grasslands, however has never been found in project area.
Many-stemmed dudleya *Dudleya multicaulis*	Fed: none State: none CNPS List1B	Coastal sage scrub, clay soils, northern exposure	P	A	Moderate potential habitat, however has never been found in project area.
Salt Spring checkerbloom *Sidalcea neomexicana*	Fed: none State: none CNPS List2	chapparal and coastal scrub in alkaline soils	A	A	Moderate potential habitat, however has never been found in project area.
Santa Ana River woollystar *Eriastrum densifolium* ssp. *sanctorum*	Fed: endangered State: endangered CNPS List1B	Alluvial scrub in river floodplains	A	A	Endemic to Santa Ana River. Not observed in project area.
Catalina Mariposa lily *Calochortus catalinae*	Fed: none State: none CNPS List4	Annual grasslands	P	A	May occur in annual grasslands in Slaughter Canyon and Bane Canyon ridge. Not observed in project area

Intermediate mariposa lily (*Calochortus weedii* var. *intermedius*)**.** This is a CNPS List 1B (rare, threatened, or endangered in California and elsewhere) species that may occur in annual grassland communities, and is found during years of higher rainfall (Psomas 2002). This species was not found in the Bane Canyon area in 2002 and 2003 and the proposed project would have no potential to impact this species.

Many-stemmed dudleya (*Dudleya multicaulis*)**.** Many-stemmed dudleya is a Federal Species of Concern, CNPS list 1B species. This perennial species is found within chaparral, coastal sage scrub, and grassland habitats (CNPS 2004). It blooms in late spring and summer, and may be found up to 790 m in elevation. Its existence is threatened by development, road construction, grazing, and recreation. No individuals of this species were found during surveys in 2002 and 2003 in the proposed project area. Due to the absence of this species, there are no impacts expected from this project.

Sensitive Wildlife Species

Birds

Sixteen sensitive bird species have the potential to occur within the project area (Appendix D). Surveys were conducted according to USFWS protocol for the federally endangered least Bell's vireo and southwestern willow flycatcher (Smith 2003). Other species observed in the project area were incidental sightings. Special-status birds species which have potential to occur in the project area are listed in Table 4. Three passerine bird species for which potential habitat exists in the project area are federally or state listed as threatened or endangered: the least Bell's vireo, southwestern willow flycatcher, and the coastal California gnatcatcher.

Golden eagle *(Aquila chrysaetos)*. Golden eagles are protected by the federal Bald and Golden Eagle Protection Act, and are California Species of Special Concern and Fully Protected Species. They may frequent rolling hills and other open terrain for hunting, and typically nest in cliffs. Golden eagles have been observed foraging in Bane Canyon. However, no suitable nesting habitat exists there. Project activities would not affect nesting golden eagles, and there is no potential for the project to impact this species.

Cooper's hawk *(Accipiter cooperi)*. Cooper's hawk, a California Species of Special Concern, have been observed in the Bane Canyon area. They may use the large sycamore trees in the canyon for perching, foraging and nesting. Breeding season takes place March through August. There is potential for this project to impact this species during nesting season, and indirect impacts could result due to loss of habitat.

White-tailed kite *(Elanus leucurus)* is a Federal Species of Concern and California Fully Protected Species. They are found in herbaceous and open habitats, including lowland grasslands, wetlands, and riparian zones associated with open areas. They may nest in dense tree stands, located near an open foraging area. Breeding occurs from February to October (Zeiner et al. 1990). White-tailed kited have been observed foraging in Bane Canyon and may nest there. There is potential for this species to be impacted during construction within the nesting season, and indirect impacts could result due to loss of habitat.

Burrowing owl (*Athene cunicularia hypugea)* is a California Species of Special Concern. They favor burrows in open, dry grasslands, and may use rodent or other burrows for cover. Little suitable habitat exists within Bane Canyon that would support burrowing owls, and no burrowing owls have been sighted in this area. There is no potential for this project to impact burrowing owls in Bane Canyon.

Table 4. Sensitive Bird Species Potentially Occurring Within the Area of Potential Effect (APE).

Common name	Scientific Name	Status	Habitat	Presence	Status at CHSP
Golden eagle	*Aquila chrysaetos*	CSC, FP	P	P	Forages in Bane Cyn, no suitable nesting habitat
Cooper's hawk	*Accipiter cooperi*	CSC	P	P	Potential nesting habitat present
White-tailed kite	*Elanus leucurus*	FSC, FP	P	P	Potential nesting habitat present
Burrowing owl	*Athene cunicularia*	FSC, CSC	A	A	Marginal suitable habitat
Long-eared owl	*Asio otus*	CSC	P	P	Potential nesting habitat present
Coastal California gnatcatcher	*Polioptila californica californica*	FT, CSC	P	P	Moderate quality habitat potential. None observed in Bane Canyon
California thrasher	*Toxostoma redivivum*	FSC	P	P	Observed in Bane Canyon
Grasshopper sparrow	*Ammodramus savannarum*	MNBMC	P	P	Grassland habitat present. Observed in Bane Canyon
Horned lark	*Eremophila alpestris*	CSC	P	P	Found in disturbed habitats and sparse vegetation. Habitat exits in Bane Canyon.
Least Bell's vireo	*Vireo bellii pusillus*	FE, SE	P	P	Low to moderate quality riparian habitat available, and solitary male bird sighted in 2001.
Southwestern willow flycatcher	*Empidonax traillii extimus*	FE	P	A	Moderate potential, but no birds observed in Bane Canyon. Species is present in Aliso Canyon.
Yellow-breasted chat	*Icteria virens*	CSC	P	P	Moderate quality habitat potential. Species has been observed in Bane Canyon.
Yellow warbler	*Dendroica petechia brewsteri*	CSC	P	P	Habitat present, species has been observed in Bane Canyon
Western yellow-billed cuckoo	*Coccyzus americanus occidentalis*	FC, SE	P	A	Low quality habitat available. Unlikely .
Willow flycatcher	*Empidonax traillii*	SE	P	A	Moderate habitat potential Not observed in Bane Canyon .
Southern California rufous-crowned sparrow	*Aimophila ruficeps canescens*	FSC, CSC	P	A	Moderate quality habitat available. Not observed in project area.

A = absent; P = present; FC = Federal Candidate; FE = Federal Endangered; FT = Federal Threatened; FSC = Federal Species of Concern; SE = State Endangered; ST = State Threatened; FP = Fully Protected; CSC = California Species of Special Concern; MNBMC= Migratory Nongame Birds of Management Concern (FWS).

Long-eared owl *(Asio otus)* is a California Species of Special Concern. Long-eared owls prefer riparian habitat, live oak thickets, and other dense stands of trees (Zeiner et al. 1990). Breeding occurs from March to late July. Long-eared owls have been sighted near Carbon Canyon, however they have not been recorded within Bane Canyon. Suitable habitat exists for this species within Bane Canyon. However, there is little potential that they could be affected during the breeding season by project activities, since they do no appear to be breeding in Bane Canyon. There is potential for indirect impacts due to loss of habitat.

Coastal California gnatcatcher (*Polioptila californica californica*). The Federally Endangered (California Species of Special Concern) coastal California gnatcatcher is found within coastal sage scrub vegetation in southern California. The coastal California gnatcatcher is found as a locally uncommon obligate, permanent resident of coastal sage scrub (CalPIF 2004). It requires shrubs for roosting and nesting cover, and is found most commonly on low, dense coastal scrub habitat, in arid washes, and slopes of coastal hills. It is found most commonly in patches of California buckwheat, California sagebrush, and prickly pear. Gnatcatchers may additionally use habitats other than CSS for dispersal. Dispersal of juveniles requires a corridor of native vegetation to link to suitable patches of CSS (Zeiner et al 1990). The gnatcatcher is threatened due to habitat loss and fragmentation in southern California. More than 70% of their habitat is estimate to be lost due to development and urbanization (CalPIF 2004). In addition, they are impacted by brood parasitism by brown-headed cowbirds, which have contributed to the species decline in addition to habitat loss and fragmentation.

Coastal sage scrub (CSS) habitat exists in Bane Canyon, however the habitat quality for California gnatcatchers is marginal. The CSS in Bane Canyon occurs in very small patches, with little species diversity. No California gnatcatchers have been observed in Bane Canyon during, and the only location where they have been observed in CHSP is in Coal Canyon (Miner and Smith 2002). There is almost no potential for direct impacts to California gnatcatchers from this project since they appear to be absent from the area. Indirect impacts could result to gnatcatchers due to loss of habitat.

Grasshopper sparrow (*Ammodramus savannarum)* is listed with the US Fish and Wildlife Service MNBMC (Migratory Nongame Birds of Management Concern). Grasshopper sparrows have been found in the project area (Miner and Smith 2001). Grasshopper sparrows prefer grasslands, open areas, and patchy bare ground (Dudek and Associates 2003). Direct impacts to grasshopper sparrows could result from project construction and grading.

Horned lark *Eremophila alpestris* is a California Species of Special Concern. Horned larks are found within Chino Hills State Park. Horned larks may be found in a variety of habitats ranging from grasslands and shrublands to residential areas. In some areas, it may be a common to abundant resident (Dudek and Associates 2003). Impacts to horned larks may result from project construction and grading.

Southern California rufous-crowned sparrow *Aimophila ruficeps canescens* is a Federal Species of Concer and a California Species of Special Concern. Rufous-crowned sparrows have been observed within Bane Canyon (Psomas 2002). These birds may be found in grasslands, chaparral, and shrublands, predominantly associated with low shrubs and grassy areas ((Dudek and Associates 2003). Impacts to southern California rufous-crowned sparrow could result from project grading and construction.

California thrasher (*Toxostoma redivivum)* are a Federal Species of Concern and are found on the Audubon watch list. The California thrasher prefers the cover of chaparral or thickets in riparian habitats. They avoid dense tree canopies. Thrashers feed primarily on the ground, and are usually found within a few feet of shrub cover. Nests may be in large shrubs or scrubby trees (Zeiner et al 1990). California thrashers have been observed foraging in Bane Canyon and Aliso Creek (Shafer 2004). No nests have been observed, but suitable nesting habitat exists within the project area. The project has potential to impact California thrashers that may be nesting in Bane Canyon.

Least Bell's vireo (*Vireo bellii pusillus*) is a Federally Endangered and California Endangered species. Least Bell's vireo (LBV) is migratory and nests in southern California riparian habitat, and winters in Mexico. This species is a summer resident of cottonwood-willow forests, oak woodlands, shrubs, and may also be found in willow thickets. It may often be found in riparian habitats, dominated by willows with dense understory vegetation. The LBV is mainly an insectivore, and prefers willows for nesting and foraging. Nests tend to be found near the edge of thickets, three feet about the ground. Males return to the same nest in successive years, and therefore are sensitive to changes in riparian vegetation.

LBV breeding range in southern California is found in Riverside, San Diego, Santa Barbara, Ventura counties and in northern Baja California. The LBV has been impacted by loss and degradation of habitat throughout its breeding range in southern California. It is also impacted by human activities, and is additionally affected by nest parasitism by the brown-headed cowbird. Habitat has also been threatened and lost by human activities, weed encroachment, and agricultural activities.

In Chino Hills State Park, LBV has been found in Aliso Canyon and the Rolling M Ranch Area during yearly USFWS protocol surveys (Smith 2003, Shafer 2004). A program exists here to trap and remove brown-headed cowbirds (Shafer 2004). In lower Bane Canyon, a solitary male LBV was observed foraging in 2001. However, no LBV were found in Bane Canyon during protocol surveys in 2003 -2004. This project has little potential to impact LBV, since they appear to be absent from the project area. The project could affect LBV if they return to Bane Canyon or nest there. Construction of this project would result in indirect impacts to habitat which supports LBV.

Willow flycatcher (*Empidonax traillii*) is a California Endangered species. Willow flycatchers prefer dense low willow thickets in riparian habitats, near ponds or wet

meadows for both nesting and roosting. They have been observed in the Santa Ana River (CNDDB 2004), and a willow flycatcher was observed near the Chino Hills Primitive campground (approximately 1600 feet from the southern end of the project site) on 06/09/03 (Smith 2003). The habitat which exists in Bane Canyon is marginal for this species. No willow flycatchers were observed nesting in the project area. There is small potential for this project to directly impact willow flycatchers, unless they are found nesting in Bane Canyon. Indirect impacts could result from impacts to suitable willow flycatcher habitat.

Southwestern willow flycatcher (*Empidonax trailli extimusi*) Southwestern willow flycatcher is a state Endangered species and was listed as federally Endangered in 1995. Southwest willow flycatchers use dense willow thickets for nesting and perching, and use low, exposed willow branches for singing and perching (Craig and Williams 1998). They may be uncommon summer residents in wet meadows and broad, open river valleys, and may be migrants in spring and fall in lower elevations. Breeding populations now exist only in isolated areas in southern California. Riparian habitat loss has been the primary threat to willow flycatcher, and has contributed to the species' decline. In addition, heavy grazing in willow scrub has affected habitat, in particular removing the favored lower branches of shrubs. Finally, parasitism by brown-headed cowbirds has also contributed to the species' decline (Craig and Williams 1998).

Habitat exists for Southwestern willow flycatchers in Bane Canyon, however the habitat quality for flycatchers is of limited quality. Southwestern willow flycatchers also breed in the Prado Dam area. No southwestern willow flycatchers were found in the project area during USFWS-protocol surveys in 2003 (Smith 2003). There very little potential for this project to directly impact willow flycatchers. Indirect impacts to this species may result from habitat loss.

Yellow-breasted chat (*Icteria virens*) California Species of Special Concern. The yellow-breasted chat was a historically a common summer resident throughout California, but populations have been reduced due to habitat loss. They may prefer foothill riparian zones, in brushy thickets near water. They require dense riparian thickets of willows, vines, and dense brush associated with streams and small ponds, and may use taller trees for song perches. Their nests are found two to eight feet above ground in dense shrubs along streams or rivers (Zeiner et. al. 1990). Yellow-breasted chats breed from May into early August, with peak activity in June. The species has declined both as a result of the loss of riparian woodland in southern California, and most likely due to brown-headed cowbird parasitism.

Yellow-breasted chats were observed in lower Bane Canyon in 2001, but have not been observed in surveys conducted after that time (Miner and Smith 2002). They have not been recorded breeding in the area, however suitable habitat exists. Yellow-breasted chats have been observed frequently in the Rolling M Ranch area nearby. There is limited potential for this project to impact yellow-breasted chats, if they are breeding in Bane Canyon. Indirect impacts will result from habitat loss and fragmentation.

Yellow warbler (*Dendroica petichia brewsteri*) California Species of Special Concern. Yellow warblers breed in southern California in summer, typically below 2500 feet. Yellow warblers were once common to locally abundant summer residents in riparian areas throughout California. The warbler breeds in riparian woodland. Warblers prefer woodlands with medium-density brush understory, and may be found during migration in sparse to dense woodland or forest habitats. They most commonly nest in deciduous, open willow-cottonwood riparian communities; other riparian species such as alder may be common. (Zeiner et. al. 1990). Yellow warblers require riparian thickets of willow and other brush near watercourses for cover. Yellow warblers breed from mid-April into early August, and peak activity occurs in June. The number of breeding pairs have declined in many lowland areas on the southern California coast and interior valleys, and are now rare where they were formerly common (Heath 1998).

Most of the population today has been reduced and possibly extirpated due to loss of riparian habitat. The species has also been seriously impacted by brown-headed cowbird parasitism, and yellow warblers are one of the most common hosts for cowbirds (Heath 1998). Yellow warblers may also be impacted by predation by accipiters and corvids, small mammals and snakes.

Yellow warblers were found in lower Bane Canyon during surveys in 2001 (Miner and Smith 2002), and they frequent the nearby Rolling M Ranch area. They have not been observed breeding in Bane Canyon. There is potential for this project to impact yellow warblers during construction if they are breeding in the area. Indirect impacts would result from fragmentation and removal of habitat.

Western yellow-billed cuckoo (*Coccyzus americanus occidentalis)*. The western yellow-billed cuckoo is a California Endangered species. They are summer residents of riparian habitats, and prefer dense foliage in deciduous trees and shrubs, especially willows and cottonwoods. They prefer to nest in hidden horizontal branches of willows Cuckoos are threatened by habitat loss and degradation in riparian habitat due to development, OHV's, livestock grazing, and exotic weed competition (DFG 2000).

Cuckoos have not been observed in Chino Hills State Park, however they have been found breeding in high-quality riparian habitat in Prado Dam. Marginal habitat exists for cuckoos in Bane Canyon, but they have never been observed there (Miner and Smith 2002). The project has no potential to affect western yellow- billed cuckoos.

Reptiles and amphibians

Special- status reptiles and amphibians which might potentially be found in the project area are described in Table 5. The western spadefoot toad (*Spea hammondii*) was the

only sensitive amphibian species observed during surveys within the biological study area (Peregrin 2004).

Table 5. Sensitive Reptile or Amphibian Species Potentially Occurring Within the Area of Potential Effect (APE).

Species - common name	Scientific Name	Status	Habitat	Presence	Status at CHSP
Orange-throated whiptail	*Aspidoscelis hyperythrus*	CSC	P	A	Moderate potential habitat, however has never been found in project area. Unlikely.
Southwestern pond turtle	*Emys (=Clemmys) marmorata pallida*	FSC, CSC	A	A	Poor potential habitat. Unlikely.
Western spadefoot	*Spea hammondii*	FSC, CSC	P	P	Present in project area
San Diego coast horned lizard	*Phrynosoma coronatum (blainvillei)*	CSC	P	A	Moderate potential habitat, however has never been found in project area.
Coast patch-nosed snake	*Salvadora hexalepis virgultea*	CSC	P	A	Moderate potential habitat, however has never been found in project area.
Two-striped garter snake	*Thamnophis hammondii*	CSC	P	A	Moderate potential habitat, however has never been found in project area.

Orange-throated whiptail (*Cnemidophorus hyperythrus beldingi*). The orange-throated whiptail is a California Species of Special Concern and a Fully Protected Species. It inhabits low-elevation coastal scrub, and mixed chaparral habitats. They are active diurnally. There is potential for this species to be found in Bane Canyon as a limited amount of suitable habitat exists, however it has not been documented there. There is little potential for this project to impact this species.

Western spadefoot toad (*Spea hammondii).* The western spadefoot toad is a Federal Species of Concern and a California Species of Special Concern. Historically, the western spadefoot ranged from Redding to northwestern Baja California but has been extirpated from many locations within its native range. Western spadefoot toads inhabit coastal sage scrub (CSS), grassland, chaparral and grassland habitat. These may also include vernal pools or ephemeral stream courses and riparian habitats. Western spadefoot toads aestivate in burrows that may descend to one meter in depth in upland habitats which are adjacent to suitable breeding sites. Adults typically stay close to their breeding pool during the year (Peregrin 2004).

Spadefoot toads are active especially after periods of warm rains, and may form large groups of animals immediately following a period of rain (Dudek & Associates 2003). This typically occurs in the spring but can also occur during the fall. They utilize habitat

near the riparian corridor in Bane Canyon, and may be found near pools after a rainstorm, especially in warm spring weather. The spadefoot breeding season is typically from January to May, and occurs in temporary pools with water temperatures between 48° and 68° F. Development of young typically may take from 3 to 11 weeks, but is dependent on temperature (Dudek & Associates 2003, Peregrin 2004).

Specific toad surveys conducted in 2001 to 2004 in Chino Hills State Park along the existing Bane Canyon Road found four separate occurrences of spadefoot toads there (Peregrin 2004). The observations were documented south of the kiosk to the point where pavement currently begins. These individuals were located on the existing dirt road, in the creek channel, and in the man-made pond to the east of Bane Canyon Road Impacts to this species would potentially occur during project excavation, grading, and construction.

Coast patch-nosed snake (*Salvadora hexalepis virgultea*). The coast patch-nosed snake is a California Species of Special Concern. It is found in coastal chaparral, desert scrub, washes, sandy flats and rocky areas. They are active diurnally. A limited amount of suitable habitat exists in Bane Canyon, however, this species has never been documented in this area. There is little potential for this project to impact this species.

Southwestern pond turtle *(Clemmys marmorata pallida)* is a Federal Species of Concern and a California Species of Special Concern. Southwestern pond turtles are normally associated with permanent ponds, lakes, and streams or permanent pools along intermittent streams. They prefer sites with dense emergent vegetation. They also utilize upland nesting sites near aquatic sites. Southwestern pond turtles have been found in Aliso Canyon below Bane Canyon to the Santa Ana River (CNDDB 2004), however, none have been found in the project area. There is limited suitable habitat in the project area for this species, and little potential for the project to impact this species.

Two-striped garter snake (*Thamnophis hammondii*) is a California Species of Special Concern and a Fully Protected species. This is an aquatic species is associated with perennial and intermittent streams that have rocky beds and dense riparian vegetation. It is typically associated with streams that are bordered by willow thickets or other dense riparian growth. It can also be found in association with ponds, lakes, and wetlands. This snake uses small mammal burrows for overwintering. There is low to moderate potential for this species to be found in Bane Canyon, but there is no record of this species in this location.

Mammals

Sensitive mammal species potentially occurring within the proposed project area are listed in Table 6. Four sensitive bat species may be found within the project area: **Yuma myotis** (*Myotis yumanensis)* and the **western mastiff bat** *(Eumops perotis)* are both Federal Species of Concern and California Species of Special Concern, and the

pallid bat (*Antrozous pallidus)* and **California mastiff bat** (*Eumopsperotis californiucus)* are California Species of Special Concern.

Pallid bats may be found in grasslands, shrublands and woodlands and prefer rocky areas for roosting. They may also roost in hollow trees and caves. They are usually year-round residents (Zeiner et. al. 1990). The western mastiff bat may also occur in woodlands, scrubs, and grasslands. The project area provides potential roosting habitat in mature sycamores. Pocketed free-tailed bats have been detected in Bane Canyon, and they roost in cliffs (Miner 2004). There are few records of pocketed free-tailed bats within the state (DFG 1986). Yuma myotis tend to roost on bridges and buildings.

Several bat species were detected via Anabat recordings in Bane Canyon during surveys in 2002 (Miner 2002). These include the Yuma myotis and the pocketed free-tailed bat. Breeding season may extend from April through August or September. This project has the potential to affect bat species during roosting.

Table 6. Sensitive Mammal Species Potentially Occurring Within the Area of Potential Effect (APE).

Species - common name	Scientific name	Status	Habitat	Presence	Status at CHSP
Pallid bat	*Antrozous pallidus*	CSC	P	A	Suitable nesting habitat exists in Bane Canyon.
California mastiff bat	*Eumops perotis californicus*	FSC, CSC	P	A	Suitable nesting habitat exists in Bane Canyon.
Yuma myotis	*Myotis yumanensis*	FSC, CSC	P	P	Observed in Bane Canyon
Pocketed free-tailed bat	*Nyctinomops femorosaccus*	CSC	P	P	Observed in Bane Canyon, roosts in cliffs.

Sensitive Habitats

Sensitive natural communities are those that are regionally uncommon, unusually diverse, or of special concern to local, state, and federal agencies. They may also include habitats that function as linkages for wildlife movement. Elimination or substantial degradation of these communities would constitute a significant impact under CEQA.

The CNDDB query (2004) lists southern California arroyo chub/Santa Ana sucker stream, southern cottonwood-willow riparian forest, southern sycamore-alder riparian forest, southern willow scrub, and California walnut woodland as sensitive plant communities that exist within the Prado Dam 7.5-minute USGS quadrangle. Of these, only southern willow scrub and sycamore woodlands exist within the project area. The remaining natural communities exist within Chino Hills State Park but are not represented within the proposed project area.

In addition, coastal sage scrub is considered a sensitive natural community in southern California. DFG has designated a Natural Communities Conservation Program (NCCP) in order to protect and conserve coastal sage scrub. DPR has signed a Memorandum of Agreement (MOA) with DFG, and the park's inclusion in the NCCP program indicates that management of this habitat within the park should be consistent with NCCP goals (DPR 1999).

The following paragraphs outline the acreage of each vegetation type in the project area. Impact areas are illustrated in Section 5 (Anticipated Project Impacts).

Southern willow scrub. Southern willow scrub is common in Bane Creek Canyon and provides essential habitat for species which utilize riparian vegetation. It may provide habitat for a number of sensitive bird species including the southwestern willow flycatcher and least Bell's vireo. In Bane Canyon, this vegetation community is composed of a number of mixed willow species including black willow, arroyo willow, and red willow. The understory includes common natives such as mulefat and mugwort, and exotics such as poison hemlock. Approximately 10.58 acres of willow scrub habitat were mapped in the Bane Canyon area.

Sycamore woodland. Sycamore woodlands within the project area are synonymous with the description of southern sycamore-alder riparian forest as described by the CNDDB (2004), and are considered a sensitive natural resource. This community provides valuable wildlife habitat for numerous common and sensitive wildlife species in the area. 5.41 acres of sycamore woodlands were mapped within the project area.

Coastal sage scrub. Coastal sage scrub has declined rapidly in southern California and has been impacted by rapidly expanding development. This community type is not listed by regulatory agencies as sensitive within the project area, however it should be conserved because it provides habitat for a number of sensitive species. This vegetation type is important for the survival of several wildlife species, including the Federally Threatened coastal California gnatcatcher. In Bane Canyon, this community type is represented by patchy stands of California buckwheat and California sagebrush. There are also small stands of white sage. Mixed stands include both native and exotic forbs. The habitat in Bane Canyon is considered somewhat marginal and species such as the California gnatcatcher have not been documented foraging there. 7.43 acres of coastal sage scrub were mapped within the Bane Canyon project area.

Jurisdictional Wetlands and Waters of the United States. USACE defines wetlands as areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. The majority of USACE jurisdictional wetlands meet three wetland delineation criteria: hydrophytic vegetation, hydric soil types, and wetland hydrology.

Within the project area, wetlands that meet U.S. Army Corps of Engineers (USACE) wetland criteria are found associated with Bane Canyon Creek. Surveys mapped approximately 2.11 acres of wetlands in this riparian zone. The project was designed to avoid wetland habitat as much as possible. However, some wetlands will be impacted by this project's construction.

Riparian habitat associated with rivers, streams, or lakes in California is subject to regulation by the California Department of Fish and Game. Approximately 15.99 acres of riparian habitat along Bane Canyon Creek was mapped in the project area. This habitat provides foraging and nesting habitat for a number of sensitive bird species. Construction of this project would result in some impacts to riparian habitat. A Streambed Alteration Agreement would be required for impacts within this habitat.

The riparian corridor in Bane Canyon also provides a valuable biological link directly to Aliso Canyon and the Rolling M Ranch area, which is an important wildlife area within the park.

Habitat Connectivity (Wildlife Corridors and Habitat Linkages)

Chino Hills State Park is located within the Puente-Chino Hills, at the northern end of the Peninsular Ranges Geomorphic province. The Puente-Chino Hills Wildlife Corridor and the surrounding region has been designated "Hot Spot of Biodiversity" (second only to tropical rainforests), among approximately 20 that have been designated worldwide (Hills for Everyone 1994). Studies have identified important habitat linkages within the Chino-Puente Hills area, seasonal changes in wildlife movement, and the effects of urban development on wildlife movement. The Bane Canyon project area is located to the east of the main portion of the Chino-Puente Hills corridor.

Wildlife corridors are narrow zones that may provide connections for wildlife to travel between areas that provide natural habitat. Habitat linkages are less constricted, larger connections between native habitat blocks that may facilitate animal movement. These biological connections are especially important due to the increasing urbanization that surrounds Chino Hills State Park (DPR 1999). While not a significant biological corridor, the riparian zone in Bane Canyon provides a valuable biological link for animals to Aliso Canyon and the Rolling M Ranch area. These areas provide important wildlife habitat within the park and the local region, and support a number of special-status birds, including the least Bell's vireo (Smith 2003, Miner and Smith 2002).

4.4 Regional Resource Planning Context.

No regional resource management plans have been adopted for the portion of Chino Hills State Park that is included in the proposed Bane Canyon project area. A Habitat Conservation Plan (HCP) completed by the Metropolitan Water District of Southern

California and Shell Western E&P, Inc., exists for the area adjacent to the western portion of Chino Hills State Park and does not directly affect the project area (DPR 1999). In addition, nearby western Riverside County has adopted a Multiple Species Habitat Conservation Plan (MSHCP), however this plan does not affect the Entrance Road project (Dudek and Associates 2003).

5.0 ANTICIPATED PROJECT IMPACTS

Direct, indirect, and cumulative impacts to biological resources that would result due to implementation of the proposed project are discussed below.

Direct impacts were quantified by quantifying the limits of project grading within biological resources mapped within the Area of Potential Impact (APE) (Figures 1-3). This impact area includes the footprint of the entire road limit of grading and associated structures, such as retaining walls. Any biological resources contained within this area would be removed permanently. Temporary direct impacts include staging areas and the limits of work that may be outside the constructed road footprint. Areas of temporary direct impact will be restored to native habitat post-construction.

Indirect impacts are those that are likely to occur in association with project construction, such as potential equipment staging areas. In addition, short-term indirect impacts include impacts to resources such as dust, noise, and increased traffic. These impacts may temporarily disrupt habitat, and could create soil erosion and runoff. All project grading and construction would be subject to restrictions which manage erosion, runoff, and water quality, including the Clean Water Act, National Pollution Discharge Elimination System(NPDES), and a Stormwater Pollution Prevention Plan.

Indirect impacts that may affect biological resources in the project vicinity during the long term may include a change in the number of visitors, noise, lighting, increased invasion by exotic species, increased runoff from pavement areas, soil erosion, fire hazard, and changes to the local hydrology.

Explanation of Direct and Indirect Impacts and Analysis of Significance

Under the California Environmental Quality Act (CEQA), impacts to biological resources (sensitive plant and animal species and their habitats) must be analyzed to determine if project impacts are significant. Section 15382 of CEQA defines a significant effect as a substantial or potentially substantial adverse change in the physical conditions of the project area, including land, air, water, minerals, flora, fauna, and ambient noise.

However, CEQA Guidelines Section 15064(b) states that an “ironclad” definition of “significant” effect is not possible because the significance of an activity may vary with the setting. Consequences that may be determined to be a significant effect on the environment (CEQA Guidelines Appendix G) include substantial effects on rare or

endangered species or the habitat of the species. Finally, Section 15065 of CEQA provides for "Mandatory Findings of Significance" when the project has the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish and wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of an endangered, rare or threatened species.

5.1 Direct Impacts to Vegetation Communities

Implementation of the Chino Hills Entrance Road Project would result in the direct loss of the described vegetation communities and acreages below (Table 7). Loss to native communities would occur as a result of project grading and road construction, along with associated structures such as retaining walls. Temporary impacts would be limited to annual grassland. These impacts would result from project staging areas. This area would be restored to native habitat post-construction. Impacts to sensitive vegetation communities will be restored onsite within Bane Canyon at appropriate ratios.

Table 7.
Project Impacts to Vegetation Communities

Vegetation type (Holland)	Manual of California Vegetation Series	Permanent Impact Acres	Temporary Impact Acres	Total Impact Acres
Coastal sage scrub	California sagebrush or California buckwheat	0.87	0	0.87
Southern willow scrub	Arroyo willow or Mixed willow	0.06	0	0.06
Sycamore woodland	California sycamore	0.11	0	0.11
Elderberry savanna	Mexican elderberry	0	0	0
Mulefat scrub	Mulefat scrub	0.13	0	0.13
Tamarisk scrub	Tamarisk	0.03	0	0.03
Non-native annual grassland	California annual grassland	8.78	0.50	9.28
Developed land		1.59	0	1.59
Total impact area		**11.57**	**0.50**	**12.07**

No direct impacts will occur within Mexican elderberry vegetation. Also, impacts that occur in developed land are not considered significant, because this land does not provide habitat for plant or wildlife species.

Approximately 0.87 acres coastal sage scrub vegetation would be removed as a result of this project. Coastal sage scrub is considered a sensitive natural community within southern California, and is protected as a result of several regional plans (DPR 1999, Dudek and Associates 2003). Although the Bane Canyon area is not under the

jurisdiction of any specific regional plans, coastal sage scrub in the project area should be considered sensitive because it provides potential habitat for a number of wildlife and sensitive plant species. The coastal sage scrub habitat in the project area occurs in discrete patches and is of moderate to low quality. However, impacts to 0.87 acres of coastal sage scrub are considered significant. For compensatory mitigation, coastal sage scrub would be restored onsite within Bane Canyon at appropriate ratios.

0.06 acres of willow scrub will be permanently removed as a result of this project. While the acreage is relatively small, willow scrub habitat is limited in Bane Canyon and is considered a sensitive natural community (CNDDB 2004). It provides habitat and cover for a number of common and special-status wildlife species. Removing a small amount of willow scrub habitat may also affect connectivity for wildlife movement in the narrow riparian area within Bane Canyon. For compensatory mitigation, willow scrub habitat would be restored onsite within Bane Canyon at appropriate ratios. Most of the willow scrub habitat within Bane Canyon is also under the jurisdiction of the Department of Fish and Game Stream Alteration Agreement (Section 1602). Wetland impacts are shown in Table 7.

Table 8.
Project Impacts to Wetlands in Bane Canyon

Wetland type or jurisdiction	Total acres mapped	Impact Acres	Acres remaining
ACOE	2.11	0.02	2.09
ACOE and DFG	10.58	0.21	10.37
DFG	5.41	0.07	5.34
TOTAL	**18.1**	**0.30**	**17.8**

Sycamore woodland: 0.11 acres of sycamore woodland will be permanently impacted as a result of this project. This would be considered a significant impact because this is considered a sensitive natural community (CNDDB 2004) and provides habitat for several common and sensitive wildlife species. Impacts within this community will primarily occur to vegetation associated with sycamores such as willows and understory species. Mature sycamore trees will be protected during project construction, however trees less than 3" DBH (diameter at breast height) may be removed. Small sycamores which are removed will be restored near the project site within Bane canyon at a 10:1 ratio or greater. Vegetation associated within sycamore woodland community will be restored onsite at appropriate ratios.

Mulefat scrub: 0.13 acres of mulefat scrub will be permanently impacted as a result of this project. While mulefat scrub is not considered a sensitive natural community, most of this vegetation type within Bane Canyon would be considered wetland or riparian

zones under the jurisdiction of the USACOE or DFG. In addition, mulefat scrub within Bane Canyon provides important connections between the narrow riparian zone in the canyon. Impacts to wetland habitats in Bane Canyon which include mulefat scrub would be considered significant. For compensatory mitigation, impacts to wetlands and mulefat scrub would be restored onsite within Bane Canyon at appropriate ratios.

Tamarisk scrub: 0.03 acres of tamarisk would be removed as a result of this project. Since tamarisk is an invasive weedy species, this impact would not be considered significant.

Non-native annual grassland: 8.78 acres of non-native annual grassland will be removed as a result of this project. The grassland habitat in Bane Canyon is degraded and weedy and composed primarily of exotic species. However, it may provide habitat for wildlife species and native forbs and grasses. Reptiles, small mammals, and birds such as grasshopper sparrows and raptors use annual grassland for foraging, nesting, and cover. The permanent removal of 8.78 acres of available habitat for these species may be considered potentially significant.

Impacts to 1.59 acres of developed land are not considered significant. This area does not provide habitat for wildlife or native plants, and would not have a significant effect on species or habitat within Bane Canyon.

During project construction, indirect impacts to vegetation in sensitive natural community types could result from the short -term effects including runoff, dust, noise, and increased traffic. Best management practices (BMPs), included in the project description and mitigation and avoidance measures, which including dust and erosion controls, will be implemented in order to minimize these effects.

The project has been designed to avoid sensitive habitats where possible. However, long-term indirect impacts to vegetation may result from increased pavement area and traffic. These impacts may include an increase in the number of invasive species, vegetation disturbance by visitors, and runoff, dust and erosion resulting from the increase in paved area. Indirect effects may be minimized by implementing the following measures: placing barriers or interpretive signs near sensitive habitats, landscaping with native species, avoiding irrigation and herbicides near native vegetation, and channeling runoff from roads and parking lots to areas that would protect native vegetation and avoid erosion.

5.2 Sensitive Plants

No special-status plant species were found within the project area during surveys (See Section 4.3); therefore no impacts are expected to sensitive plants within the project zone. Surveys were conducted within the project area in 2002 and 2003 and no sensitive plants were located in the vicinity of the proposed project. In addition, rare plant surveys were conducted in Bane Canyon in 2001 (CSP 2002) and no sensitive plants were located near

the project footprint. There is little potential that this project would result in impacts to undocumented sensitive plant species.

Mature sycamore trees could potentially be affected by this project. Individual sycamore trees within the project zone will be conserved through avoidance measures in the project design. Sycamores less than 3" DBH may be removed as a result of this project; these will be replaced onsite within Bane Canyon at a minimum 10:1 ratio.

5.3 Sensitive Wildlife

Habitat which supports a number of common and sensitive wildlife species will be lost as a result of this project. No impacts to federally or state-listed animals would result from this project, but the western spadefoot (California Species of Special Concern) may be directly impacted due to construction activities or traffic. No significant direct impacts to wildlife are expected as a result of this project. Compensation for potential impacts to the western spadefoot toad will be provided by native habitat restoration within Bane Canyon.

Direct impacts to sensitive wildlife species are expected to be avoided through project design, construction timing, buffer zones, and planned avoidance and mitigation measures (Section 6.0). Also, habitat lost through project construction will be replaced at appropriate ratios onsite within Bane Canyon.

To the maximum extent practicable, construction during the breeding season for most birds (Feb 15 to August 31), would be limited to the first (northernmost) one mile of road where there is limited native habitat and no records of sensitive birds. If construction will occur near native habitat during the breeding season, surveys will be conducted following USFWS protocols at the appropriate time periods. If sensitive birds or nests are detecting during surveys, project activities will be modified to avoid sensitive birds and habitat. A biological monitor will be onsite during construction. Noise levels will be monitored, and any construction activity involving heavy equipment or sustained high-decibel noise levels will be conducted outside the breeding season for riparian birds.

5.4 Habitat Linkages and Movement Corridors

The proposed project will result in impacts to riparian habitat in Bane Canyon, which may provide habitat for a number of common and special-status wildlife species. This riparian zone also provides a zone for wildlife to move within Bane Canyon and a connection to higher-quality habitat in Aliso Canyon and the Rolling M Ranch. The project has been designed to avoid riparian and wetland habitat and vegetation community types where possible. The total impact to riparian vegetation in Bane Canyon

will be 0.30 acres. Some compensation for these impacts will be provided by restoring native habitat onsite at appropriate ratios. Where possible, habitat restoration will occur to fill in areas of degraded or low-quality riparian habitat. Because the impacts to riparian areas is limited to 0.30 acres and habitat restoration will occur onsite, impacts to wildlife movement will be less than significant.

6.0 CONSERVATION AND MITIGATION MEASURES

The following avoidance, conservation, and mitigation measures have been proposed to reduce impacts identified in Section 5.0 (Anticipated Project Impacts) to a less than significant level.

A total of 0.87 acres of coastal sage scrub will be removed permanently due to road construction. Compensatory mitigation will be provided by restoring coastal sage scrub to appropriate areas onsite within Bane Canyon at a 1:1 ratio. A total of 0.06 acres of willow scrub will be permanently impacted due to project construction. This vegetation community will be replanted onsite within Bane Canyon at a 3:1 ratio. 0.11 acres of sycamore woodland will be impacted permanently during project construction. This habitat will be restored onsite within Bane Canyon at a 3:1 ratio. 0.13 acres of wetlands including mulefat scrub will be impacted by the project footprint. This habitat will be restored onsite at an appropriate location at a 2:1 ratio.

For restoration of all natural community types, only plants which are appropriate and found commonly in the Bane Canyon portion of Chino Hills SP will be used. Plant material or seed source which originate from Bane Canyon, or those approved by the district ecologist, will be used. A formal restoration plan (Conceptual Restoration Plan outlined in Appendix F) will be developed by CSP prior to project construction. The restoration plan will include planting methods, weed control and management, performance criteria, a monitoring plan and contingency measures for adaptive management.

Minimization, Avoidance, and Compensatory Measures

The following avoidance measures are proposed to protect wildlife and habitat:

- Safety fencing will be in place during construction to delineate and protect environmentally sensitive areas (ESA) delineated on project plans. No construction activities will occur within these zones. ESA around sensitive natural communities will include a buffer zone sufficient to avoid both direct and indirect impacts.

- To the maximum extent possible, construction during the nesting season (February 15 to August 31) will be limited to the first (northernmost) mile of Bane Canyon, in order to avoid impacts to sensitive bird species which may occur in the higher-quality riparian habitat in the southern section of the road project area.

- Vegetation removal, including grassland mowing, would be conducted outside of the nesting season (habitat may be removed from September 1-February 14).

- Construction activities near ESA's which produce noise levels of 60 decibels or greater will be scheduled to take place during the non-breeding season, or should occur at least 300 feet away from riparian vegetation. Construction activities may proceed in these zones if protocol surveys confirm absence of least Bell's vireo and southwestern willow flycatcher. Noise levels would be monitored by a qualified biological monitor when construction occurs within the vicinity of sensitive riparian habitat. If sensitive birds are observed during construction, work will be redirected and appropriate action taken to prevent disturbance to nesting birds.

- A CSP-qualified biological monitor will be onsite during construction activities that may affect sensitive habitats or species. The biological monitor may suspend or recommend modification of construction activities or location if there is a potential impact to sensitive species.

- If construction activities during the nesting season may potentially impact nesting habitat for riparian birds, surveys will be conducted prior to construction to determine the presence of nesting birds. Beginning thirty (30) days prior to the potential disturbance of suitable nesting habitat, a CSP-qualified biologist would conduct weekly bird surveys to detected any protected native birds in the habitat to be removed and within 300 feet of the construction work area. The last survey would be conducted no more than three days prior to the initiation of construction activities. If an active nest is located, construction activities within 300 feet of the nest shall be postponed until the nest is vacated, juveniles have fledged, and there is no evidence of a second nesting attempt.

- Best Management Practices (BMPs) will be implemented and maintained during and post-construction in order to avoid erosion and to protect sensitive natural communities. The BMPs established for post-construction erosion control will be assessed annually and maintained as needed for a period of three years following construction.

- To protect sensitive riparian areas and wetlands, the contractor will prepare a Spill Prevention, Control and Countermeasure Plan prior to the start of construction, and maintain a spill kit onsite throughout the life of the project. All fueling and maintenance of construction equipment and staging areas shall occur at least 50 feet from any water source or riparian habitat. Fueling and maintenance will be conducted on pavement unless designated otherwise.

- Excavated soil will only be deposited at designated sites; disposal sites will be separated from sensitive habitats by approved containment and erosion control methods.

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A feasibility study and biological survey covering the proposed project area, conducted by Psomas in 2002, also provided information for this project. The report analyzed project alternatives in Bane, Borba, and Slaughter Canyons, and addressed sensitive resources in these locations. The report also provided vegetation maps of the project zone. The Biological Resources section of this feasibility report studied sensitive habitats along Bane Canyon Creek. No focused plant or wildlife surveys were conducted as a part of this 2002 feasibility study.

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APPENDIX A

PROJECT FIGURES

Appendix B. Plant Species Observed within the Proposed Chino Hills Entrance Road Project Vicinity

FAMILY	*Scientific name*	common name	
ANACARDIACEAE - SUMAC FAMILY	*Toxicodendron diversilobum*	poison-oak	
APIACEAE - CARROT FAMILY	*Conium maculatum*	poison-hemlock	*
	Foeniculum vulgare	sweet fennel	*
ARECACEAE - PALM FAMILY	*Washingtonia robusta*	Fan palm	*
ASCLEPIADACEAE - MILKWEED FAMILY	*Asclepias fascicularis*	narrow-leaf milkweed	
ASTERACEAE - SUNFLOWER FAMILY	*Ambrosia psilostachya var. californica*	western ragweed	
	Artemisia californica	coastal sagebrush	
	Artemisia douglasiana	California mugwort	
	Baccharis pilularis	coyote brush	
	Baccharis salicifolia	mule fat	
	Carduus pycnocephalus	Italian thistle	*
	Centaurea melitensis	tocalote	*
	Conzya canadensis	horseweed	*
	Cynara cardunculus	cardoon, artichoke thistle	*
	Deinandra [Hemizonia] fasciculata	fascicled tarweed	
	Encelia californica	California bush sunflower	
	Gnaphalium californicum	California everlasting	
	Gnaphalium canescens	white everlasting	
	Gnaphalium luteo-album	white cudweed	*
	Gutierrezia californica	California matchweed	
	Heterotheca grandiflora	telegraph weed	
	Hypochaeris glabra	smooth car's-ear	*
	Isocoma menziesii ssp. veneta	coastal golden bush	
	Lactuca serriola	prickly lettuce	*
	Lessingia filaginifolia	virgate cudweed aster	
	Picris echioides	bristly ox-tongue	*
	Pluchea odorata	marsh-fleabane	
	Rafinesquia californica	California chicory	
	Senecio vulgaris	common groundsel	*
	Silybum marianum	milk thistle	*
	Sonchus asper	prickly sow-thistle	*
	Sonchus oleraceus	common sow-thistle	*
	Stephanomeria virgata	twiggy wreathplant	
	Xanthium strumarium	cocklebur	*
BORAGINACEAE - BORAGE FAMILY	*Amsinckia menziesii*	yellow fiddleneck	
BRASSICACEAE - MUSTARD FAMILY	*Brassica nigra*	black mustard	*
	Lepidium nitidum	shining peppergrass	
	Raphanus sativus	wild radish	*

FAMILY	*Scientific name*	common name	
CACTACEAE - CACTUS FAMILY	*Opuntia littoralis*	coastal prickly-pear	
CAPRIFOLIACEAE - HONEYSUCKLE FAMILY	*Lonicera subspicata var. denudata*	southern honey suckle	
	Sambucus mexicana	Mexican elderberry	
CARYOPHYLLACEAE - PINK FAMILY	*Silene gallica*	common catchfly	*
CHENOPODIACEAE - GOOSEFOOT FAMILY	*Atriplex semibaccata*	Australian saltbush	*
	Chenopodium murale	nettle-leaved goosefoot	*
	Salsola tragus	Russian-thistle	*
CONVOLVULACEAE - MORNING-GLORY FAMILY	*Convolvulus arvensis*	bindweed	*
CRASSULACEAE - STONECROP FAMILY	*Dudleya lanceolata*	lanceleaf dudleya	
CUCURBITACEAE - GOURD FAMILY	*Cucurbita foetidissima*	coyote-melon, calabazilla	
	Marah macrocarpus	wild cucumber	
CYPERACEAE - SEDGE FAMILY	*Scirpus americanus*	winged three-square	
EUPHORBIACEAE - SPURGE FAMILY	*Eremocarpus setigerus*	doveweed	
	Euphorbia peplus	petty spurge	*
	Ricinus communis	castor-bean	*
FABACEAE - PEA FAMILY	*Lotus purshianus*	Spanish-clover	
	Lotus scoparius	deerweed	
	Lupinus bicolor	Lindley's annual lupine	
	Lupinus succulentis	arroyo lupine	
	Medicago polymorpha	California burclover	*
	Melilotus albus	white sweet-clover	*
	Melilotus indica	yellow sweet-clover	*
FAGACEAE - BEECH FAMILY	*Quercus agrifolia*	coast live oak	
GERANIACEAE - GERANIUM FAMILY	*Erodium cicutarium*	red-stemmed filaree	*
	Erodium moschatum	white-stemmed filaree	*
IRIDACEAE - IRIS FAMILY	*Sisyrinchium bellum*	blue-eyed grass	
LAMIACEAE - MINT FAMILY	*Marrubium vulgare*	horehound	*
	Salvia apiana	white sage	
	Salvia columbariae	chia	
	Salvia mellifera	black sage	
	Trichostema lanceolatum	vinegar weed	
LILIACEAE - LILY FAMILY	*Bloomeria crocea var. crocea*	common golden star	
	Chlorogalum pomeridianum	soap plant	
	Dichelostemma capitata	blue dicks	

FAMILY	***Scientific name***	**common name**	
MALVACEAE - MALLOW FAMILY	*Malva parviflora*	cheeseweed	*
NYCTAGINACEAE - FOUR O'CLOCK FAMILY	*Mirabilis californica var. californica*	California wishbone-bush	
ONAGRACEAE - EVENING-PRIMROSE FAMILY	*Clarkia bottae*	punch-bowl godetia	
	Epilobium canum	California fuchsia	
	Epilobium ciliatum	California cottonweed	
PAPAVERACEAE - POPPY FAMILY	*Eschscholzia californica*	California poppy	
PLANTAGINACEAE - PLANTAIN FAMILY	*Plantago lanceolata*	English plantain	*
PLATANACEAE - SYCAMORE FAMILY	*Platanus racemosa*	western sycamore	
POACEAE - GRASS FAMILY	*Avena barbata*	slender oat	*
	Bromus diandrus	ripgut grass	*
	Bromus hordeaceus	soft chess	*
	Bromus madritensis ssp. rubens	foxtail chess	*
	Bromus tectorum	cheat grass	*
	Cynodon dactylon	Bermuda grass	*
	Distichlis spicata	salt grass	
	Hordeum murinum	glaucous foxtail barley	*
	Lamarckia aurea	goldentop	*
	Leymus condensatus	giant ryegrass	
	Leymus tritocoides	beardless wild rye	
	Lolium multiflorum	English ryegrass	*
	Nassella lepida	foothill stipa	
	Nassella pulchra	purple needlegrass	
	Piptatherum miliaceum	smilo grass	*
	Schismus barbatus	Mediterranean schismus	*
	Vulpia myuros	rattail fescue	*
POLYGONACEAE - BUCKWHEAT FAMILY	*Eriogonum elongatum*	long-stemmed buckwheat	
	Eriogonum fasciculatum	California buckwheat	
	Polygonum arenastrum	common knotweed	*
	Rumex crispus	curly dock	*
PRIMULACEAE - PRIMROSE FAMILY	*Anagallis arvensis*	scarlet pimpernel	*
RUBIACEAE - MADDER FAMILY	*Galium angustifolium ssp. angustifolium*	narrow-leaved bedstraw	
SALICACEAE - WILLOW FAMILY	*Salix exigua*	narrow-leaved willow	
	Salix gooddingii var. gooddingii	Goodding's black willow	
	Salix laevigata	red willow	
	Salix lasiolepis var. bracelinae	arroyo willow	
SCROPHULARIACEAE - FIGWORT FAMILY	*Mimulus aurantiacus*	bush monkeyflower	

FAMILY	***Scientific name***	**common name**	
SOLANACEAE - NIGHTSHADE FAMILY	*Nicotiana glauca*	tree tobacco	*
	Solanum douglasii	white nightshade	
TAMARICACEAE - TAMARISK FAMILY	*Tamarix aphylla*	athel	*
TYPHACEAE - CATTAIL FAMILY	*Typha angustifolia*	narrow-leaved cattail	
URTICACEEAE - NETTLE FAMILY	*Urtica urens*	dwarf nettle	*
VISCACEAE - MISTLETOE FAMILY	*Phoradendron macrophyllum*	big leaf mistletoe	
ZYGOPHYLLACEAE - CALTROP FAMILY	*Tribulus terrestris*	puncture vine	*

indicates non-native species*

Appendix C.
Faunal Species Observed or Detected within the Proposed Chino Hills Entrance Road Project Vicinity

		Scientific name	Common name
1		*Hylephila phyleus*	fiery skipper
2		*Plebejus acmon*	acmon blue
3		*Danaus gilippus*	queen
4		*Nymphalis antiopa*	Mourning cloak
5		*Junonia coenia*	buckeye
6		*Limenitis lorquini*	Lorquin's admiral
7		*Vanessa cardui*	painted lady
8		*Papilio eurymedon*	pale swallowtail
9		*Papilio rutulus*	tiger swallowtail
10	*	*Pieris rapae*	cabbage butterfly
11		*Anthocharis sara*	Sara orange-tip
12		*Pontia protodice*	common white
13		*Apodemia mormo virgulti*	Behr's metalmark
14		*Bufo boreas*	western toad
15		*Hyla regilla*	Pacific treefrog
16		*Spea hammondi*	western spadefoot toad
17		*Gerrhonotus multicarinatus*	southern alligator lizard
18		*Pituophis melanoleucus*	gopher snake
19		*Sceloporus occidentalis*	western fence lizard
20		*Uta stansburiana*	side-blotched lizard
21		*Crotalus viridis*	western rattlesnake
22		*Aquila chrysaetos*	Golden eagle
23		*Elanus leucurus*	White-tailed kite
24		*Buteo swainsoni*	Swainson's hawk
25		*Accipiter cooperii*	Cooper's hawk
26		*Buteo jamaicensis*	red-tailed hawk
27		*Circus cyaneus*	northern harrier
28		*Psaltriparus minimus*	bushtit
29		*Cathartes aura*	turkey vulture
30		*Zenaida macroura*	mourning dove
31		*Aphelocoma coerulescens*	scrub jay
32		*Agelaius phoeniceus*	red-winged blackbird
33		*Ammodramus savannarum*	grasshopper sparrow
34		*Dendroica coronata*	yellow-rumped warbler
35		*Dendroica petechia*	yellow warbler
36		*Euphagus cyanocephalus*	Brewer's blackbird
37		*Geothlypis trichas*	common yellowthroat
38		*Guiraca caerulea*	blue grosbeak
39		*Icterus bullockii*	Bullock's oriole
40		*Melospiza melodia*	song sparrow
41	*	*Molothrus ater*	brown-headed cowbird
42		*Passerina amoena*	lazuli bunting

		Scientific name	**Common name**
43		*Pipilo crissalis*	California towhee
44		*Pipilo erythrophthalmus*	spotted towhee
45		*Wilsonia pusilla*	Wilson's warbler
46		*Zonotrichia leucophrys*	white-crowned sparrow
47		*Aimophila ruficeps canescens*	Southern California rufous-crowned sparrow
48		*Falco sparverius*	American kestrel
49		*Carduelis psaltria*	lesser goldfinch
50		*Carduelis tristis*	American goldfinch
51		*Carduelis lawrencei*	Lawrence's goldfinch
52		*Carpodacus mexicanus*	house finch
53		*Stelgidopteryx serripennis*	northern rough-winged swallow
54		*Mimus polyglottos*	northern mockingbird
55		*Toxostoma redivivum*	California thrasher
56		*Chamaea fasciata*	wrentit
57		*Callipepla californica*	California quail
58		*Colaptes auratus*	northern flicker
59		*Picoides nuttallii*	Nuttall's woodpecker
60	*	*Sturnus vulgaris*	European starling
61		*Archilochus alexandri*	black-chinned hummingbird
62		*Calypte anna*	Anna's hummingbird
63		*Calypte costae*	Costa's hummingbird
64		*Selasphorus rufus*	Rufous hummingbird
65		*Thryomanes bewickii*	Bewick's wren
66		*Troglodytes aedon*	house wren
67		*Contopus sordidulus*	western wood-pewee
68		*Myiarchus cinerascens*	ash-throated flycatcher
69		*Sayornis nigricans*	black phoebe
70		*Tyrannus verticalis*	western kingbird
71		*Tyrannus vociferans*	Cassin's kingbird
72		*Felis concolor*	Mountain lion
73	*	*Canis familiaris*	domestic dog
74		*Canis latrans*	coyote
75		*Odocoileus hemionus*	mule deer
76	*	*Didelphis virginiana*	Virginia opossum
77		*Lynx rufus*	bobcat
78		*Thomomys bottae*	Botta's pocket gopher
79		*Sylvilagus bachmani*	brush rabbit
80		*Mephitis mephitis*	striped skunk
81		*Procyon lotor*	common raccoon
82		*Spermophilus beecheyi*	California ground squirrel
83		*Eptesicus fuscus*	Big brown bat
84		*Lasiurus blossevilli*	Western red bat
85		*Lasiurus cinereus*	Hoary bat
86		*Myotis yumanensis*	Yuma myotis
87		*Tadarida brasiliensis*	Brazilian free-tailed bat
88		*Nyctinomops femorosaccus*	Pocketed free-tailed bat

Appendix D. Listed and Proposed Species Potentially Occurring in the Project Area

Common Name	Scientific Name	Status	Habitat Presence	Species Presence	Rationale
Natural Communities					
Southern California arroyo chub/Santa Ana sucker stream			A		No suitable habitat in Bane Canyon
Southen cottonwood willow riparian forest			A		No suitable habitat in Bane Canyon
Southern sycamore alder riparian woodland			P		Sycamore series present in Bane Canyon
Southern willow scrub			P		Present in project area
Coastal sage scrub			P		Present in project area
California walnut woodland			A		No suitable habitat in Bane Canyon
Plants					
Chaparral sand-verbena	*Abronia villosa* var. *aurita*	CNPS List1B	P	A	Moderate potential habitat, however has never been found in project area.
Coulter's saltbush	*Atriplex coulteri*	CNPS List1B	A	A	No appropriate microhabitat onsite
Intermediate mariposa lily	*Calochortus weedii* var. *intermedius*	CNPS List1B	P	A	Potential to occur within annual grasslands, however has never been found in project area.
Many-stemmed dudleya	*Dudleya multicaulis*	CNPS List1B	P	A	Moderate potential habitat, however has never been found in project area.
Salt Spring checkerbloom	*Sidalcea neomexicana*	CNPS List2	A	A	Moderate potential habitat, however has never been found in project area.
Santa Ana River woollystar	*Eriastrum densifolium* ssp. *sanctorum*	FE, SE, CNPS List1B	A	A	Endemic to Santa Ana River. Not observed in project area.
Catalina Mariposa lily	*Calochortus catalinae*	CNPS List4	P	A	May occur in annual grasslands in Slaughter Canyon and Bane Canyon ridge. Not observed in project area
Fish					
Santa Ana sucker	*Catostomus santaanae*	FT, CSC	A	A	No suitable aquatic habitat present in Bane Canyon
Reptiles and Amphibians					
Orange-throated whiptail	*Aspidoscelis hyperythrus*	CSC	P	A	Moderate potential habitat, however has never been found in project area. Unlikely.
Southwestern pond turtle	*Emys (=Clemmys) marmorata pallida*	FSC, CSC	A	A	Poor potential habitat. Unlikely.
Western spadefoot	*Spea hammondii*	FSC, CSC	P	P	Present in project area
San Diego coast horned lizard	*Phrynosoma coronatum (blainvillei)*	CSC	P	A	Moderate potential habitat, however has never been found in project area.
Coast patch-nosed snake	*Salvadora hexalepis virgultea*	CSC	P	A	Moderate potential habitat, however has never been found in project area.
Two-striped garter snake	*Thamnophis hammondii*	CSC	P	A	Moderate potential habitat, however has never been found in project area.

Common Name	Scientific Name	Status	Habitat Presence	Species Presence	Rationale
Birds					
Golden eagle	*Aquila chrysaetos*	CSC, FP	P	P	Forages in Bane Cyn, no suitable nesting habitat
Cooper's hawk	*Accipiter cooperi*	CSC	P	P	Potential nesting habitat present
White-tailed kite	*Elanus leucurus*	FSC, FP	P	P	Potential nesting habitat present
Burrowing owl	*Athene cunicularia*	FSC, CSC	A	A	Marginal suitable habitat
Long-eared owl	*Asio otus*	CSC	P	P	Potential nesting habitat present
Coastal California gnatcatcher	*Polioptila californica californica*	FT, CSC	P	P	Moderate quality habitat potential. None observed in Bane Canyon
California thrasher	*Toxostoma redivivum*	FSC	P	P	Observed in Bane Canyon
Grasshopper sparrow	*Ammodramus savannarum*	MNBMC	P	P	Grassland habitat present. Observed in Bane Canyon
Horned lark	*Eremophila alpestris*	CSC	P	P	Found in disturbed habitats and sparse vegetation. Habitat exits in Bane Canyon.
Least Bell's vireo	*Vireo bellii pusillus*	FE, SE	P	P	Low to moderate quality riparian habitat available, and solitary male bird sighted in 2001. However, none have been observed nesting
Southwestern willow flycatcher	*Empidonax traillii extimus*	FE	P	A	Moderate potential, but no birds observed in Bane Canyon. Species is present in Aliso Canyon.
Yellow-breasted chat	*Icteria virens*	CSC	P	P	Moderate quality habitat potential. Species has been observed in Bane Canyon.
Yellow warbler	*Dendroica petechia brewsteri*	CSC	P	P	Habitat present, species has been observed in Bane Canyon
Western yellow-billed cuckoo	*Coccyzus americanus occidentalis*	FC, SE	P	A	Low quality habitat available. Unlikely .
Willow flycatcher	*Empidonax traillii*	SE	P	A	Moderate habitat potential Not observed in Bane Canyon .
Southern California rufous-crowned sparrow	*Aimophila ruficeps canescens*	FSC, CSC	P	P	Moderate quality habitat available. Has been observed in Bane Canyon.
Mammals					
Pallid bat	*Antrozous pallidus*	CSC	P	A	Suitable nesting habitat exists in Bane Canyon.
California mastiff bat	*Eumops perotis californicus*	FSC, CSC	P	A	Suitable nesting habitat exists in Bane Canyon.
Yuma myotis	*Myotis yumanensis*	FSC, CSC	P	P	Observed in Bane Canyon. Forage in riparian corridor.
Pocketed free-tailed bat	*Nyctinomops femorosaccus*	CSC	P	P	Observed in Bane Canyon, roosts in cliffs. Forages in riparian zone

A = absent; P = present; FC = Federal Candidate; FE = Federal Endangered; FT = Federal Threatened; FSC = Federal Species of Concern; SE = State Endangered; ST = State Threatened; FP = Fully Protected; CSC = California Species of Special Concern; MNBMC= Migratory Nongame Birds of Management Concern (FWS); CNPS = California Native Plant Society (List 1A = presumed extinct in California; List 1B = rare or endangered in California and elsewhere; List 2 = rare or endangered in California, more common elsewhere; List 4 = a watch list).

APPENDIX E

SPECIES SENSITIVITY CATEGORIES

Federal

Endangered. Taxa threatened throughout all or a significant portion of their range.

Threatened. Taxa likely to become endangered in the foreseeable future.

State of California

Endangered. Taxa which are in serious danger of becoming extinct throughout all, or a significant portion, of their range due to one or more causes including loss of habitat, change in habitat, over exploitation, predation, competition, or disease (Section 2062 of the Fish and Game Code).

Threatened. Taxa which, although not presently threatened with extinction, are likely to become endangered species in the foreseeable future (Section 2067 of the Fish and Game Code).

Rare. Taxa which, although not presently threatened with extinction, are present in such small numbers throughout their range that they may become endangered if the present environment worsens (Section 1901 of the Fish and Game Code).

Candidate. Taxa which the Fish and Game Commission has formally noticed as being under review by the Department in addition to the list of threatened and endangered species.

California Native Plant Society

Lists

- 1A: Presumed Extinct in California
- 1B: Rare or Endangered in California and Elsewhere
- 2: Rare or Endangered in California, More Common Elsewhere
- 3: Need More Information
- 4: Plants of Limited Distribution

Note: Plants on CNPS list 1B meet California Department of Fish and Game Criteria for Rare or Endangered listing.

APPENDIX F

CHINO HILLS ENTRANCE ROAD PROJECT

CONCEPTUAL HABITAT RESTORATION PLAN

INTRODUCTION

The Chino Hills Entrance Road project will result in a loss of habitat within coastal sage scrub (0.87 acres impacted), willow scrub (0.06 acres), mulefat scrub (0.13 acres) and sycamore woodland (0.11 acres) vegetation communities. These habitats will be restored onsite within Bane Canyon at appropriate rations. A restoration plan will be provided as a mitigation for loss of sensitive vegetation communities within the project zone (see Mitigation Measure Bio-1, Chino Hills Entrance Road Project Draft EIR). Habitat restoration will follow conditions outlined in permits issued by the California Department of Fish and Game (Section 1602 Streambed Alteration) and the US Army Corps of Engineers (CWA Section 404). A final restoration plan will be completed prior to project construction.

Site Location

The project sites are located within Bane Canyon in Chino Hills State Park. Coastal sage scrub vegetation is located primarily on the east side of the canyon. Riparian zones are located in the canyon bottom. The project area is approximately 2 miles long, starting at Elinvar Road in Chino Hills. Site restoration will occur at designated locations within Bane Canyon near the project zone.

Table 1.
Project Impacts to Vegetation Communities and Mitigation Acreage

Vegetation type (Holland)	Manual of California Vegetation Series	Impact Acres	Mitigation ratio	Restoration Acres
Coastal sage scrub	California sagebrush or California buckwheat	0.87	1:1	0.87
Southern willow scrub	Arroyo willow or Mixed willow	0.06	3:1	0.18
Sycamore woodland	California sycamore	0.11	3:1	0.33
Elderberry savanna	Mexican elderberry	0	0	0
Mulefat scrub	Mulefat scrub	0.13	3:1	0.39
Tamarisk scrub	Tamarisk	0.03	0	0.03
Non-native annual grassland	California annual grassland	8.78	0	0
Developed land		1.59	0	0
Total				**0.77**

PLANTING PLAN

Types of Habitat to Be Created or Enhanced

Plant material should be grown from seed collected within Bane Canyon or another approved source prior to project construction. Plant species which should be chosen for the project should include (but not limited to) the following lists for each vegetation type. Additions or substitutions to the plant list should be approved by the resource ecologist.

Coastal sage scrub

Coastal sagebrush	*Artemisia californica*
California buckwheat	*Eriogonum fasciculatum*
Fascicled tarweed	*Deinandra [Hemizonia] fasciculata*
California poppy	*Eschscholzia californica*
White sage	*Salvia apiana*

Southern willow scrub

Narrow-leaved willow	*Salix exigua*
Goodding's black willow	*Salix gooddingii var. gooddingii*
Red willow	*Salix laevigata*
Arroyo willow	*Salix lasiolepis var. bracelinae*
California mugwort	*Artemisia douglasiana*
Mule fat	*Baccharis salicifolia*

Sycamore woodland

Western sycamore	*Platanus racemosa*
Goodding's black willow	*Salix gooddingii var. gooddingii*
Arroyo willow	*Salix lasiolepis var. bracelinae*
California mugwort	*Artemisia douglasiana*
Mule fat	*Baccharis salicifolia*

Mulefat scrub

Mule fat	*Baccharis salicifolia*
California mugwort	*Artemisia douglasiana*
Arroyo willow	*Salix lasiolepis var. bracelinae*

Spacing for native plant restoration

Wetlands:		
Herbs	4’ centers	**2722 plants/acre**
Riparian:		
Trees	10’ centers	436 trees/acre
Shrubs	15’ centers	194 shrubs/acre
Herbs	12’ to 15’ centers	194 herbs/acre
Total:		**824 plants per acre**

Erosion control seeding
Non-native annual grassland areas will be seeded post-construction for erosion control. The seed mix will include a mix of native grasses and forbs which are collected locally. Seed collection and growing would be planned with a contract grower prior to project implementation. Certified weed-free straw mulch may be used where appropriate.

Timing of Plant Installation
Salvaged soil may be put in place prior to the rainy season. Containerized plants would be installed at the beginning of the rainy season and watered on a consistent schedule until plants become established.

Impact Avoidance - Sensitive Resources
No sensitive plants would be impacted by restoration efforts. Existing native habitat and riparian vegetation will be protected during the revegetation effort.

SITE MAINTENANCE

Weed Control Methodologies
Maintenance includes weed control activities such as hand-weeding or removing plants with tools. Maintenance will occur on a regular schedule to reduce competition from exotic weeds until new plants are established and until plantings meet designated success criteria. Maintenance may occur for a period of one to three years. Container plants that do not become established should be replaced until the site reaches the specified performance criteria.

Herbicide use will be limited, and only a "water-safe" herbicide (such as *Rodeo)* may be used near riparian zones. Herbicide may be used if deemed appropriate to spray individual plants by hand using a portable or backpack sprayer. Large-scale herbicide spraying will not occur as a part of this project. Weed maintenance efforts will occur on a regular basis to minimize competition to native plants from encroaching weed species.

Irrigation
Irrigation of installed container plants would consist of hand-watering or an installed drip irrigation system.

MONITORING

Detailed methodology for monitoring will be included in the Restoration Plan completed prior to project construction. Monitoring will include an appropriate methodology such as point-intercept transects and will be completed on a designated schedule for one to three years. Performance standards will meet or exceed those recommended by permitting agencies. A monitoring report will be completed after data collection, and will provide data summaries and comparison to the restoration performance standards.

Duration of Data Collection
Monitoring of the revegetation project will take place for a minimum of three years after planting is completed.

Planting Success Criteria and Adaptive Management
Planting performance standards and adaptive management strategies will be determined and included in the Restoration Plan prepared prior to project construction. These will meet permitting agency mitigation and monitoring requirements.

Katz, Okitsu & Associates
Traffic Engineers and Transportation Planners

1055 Corporate Center Dr.
Suite 300
Monterey Park, CA
91754-7668
323.260.4703
fax: 323.260.4705
koala@katzokitsu.com
www.katzokitsu.com

Memorandum

To: Mr. Brian Wright
P S O M A S
2295 Gateway Oaks Drive, Suite 250
Sacramento, CA 95833
Telephone: (916) 929-7100
FAX: (916) 929-6380 Fax

From: Joel Falter

Date: July 22, 2004

RE: Chino Hills State Park – Bane Canyon Road Entrance Improvements

JA4059

INTRODUCTION

This memorandum has been prepared to document the existing transportation infrastructure, existing traffic conditions and forecast future traffic conditions near the proposed Chino Hills State Park - Bane Canyon Road Entrance improvements. The materials presented in this memorandum are intended to satisfy the traffic circulation analysis requirements of the environmental document.

Photograph 1 – Existing Bane Canyon Road entrance to Chino Hills State Park

The proposed project will result in the improvement to the entrance and existing 2.2-mile dirt road that serves as the Bane Canyon Road entrance to the park. Bane Canyon Road should be considered as the southerly extension of Elinvar Drive or the project entrance. Photograph 1 shows the existing Bane Canyon Road park entrance. The park is currently open from 8AM to Sunset and no changes to the hours of operation are planned.

San Diego
619.683.2933
fax: 619.683.7982

Tustin
714.573.0317
fax: 714.573.9534

San Bernardino
909-890-9693
fax: 909-890-9694

DBE/MBE

PROJECT LOCATION

The proposed project is located in San Bernardino County at the northern end on Chino Hills State Park adjacent to the City of Chino Hills. The northern limit of the project is located less than ½ mile south of Soquel Canyon Parkway at the intersection of Bane Canyon Road, Elinvar Road and Sapphire Road. The project extends approximately two miles to the south and crosses property owned by the City of Chino Hills approximately ½ mile south of the northern project limit. The southern project limit is located where the previously built two-lane paved road begins in the park interior.

Figure 1 shows the regional location map of Chino Hills State Park. Figure 2 shows the project location.

FIGURE 1 – REGIONAL LOCATION MAP

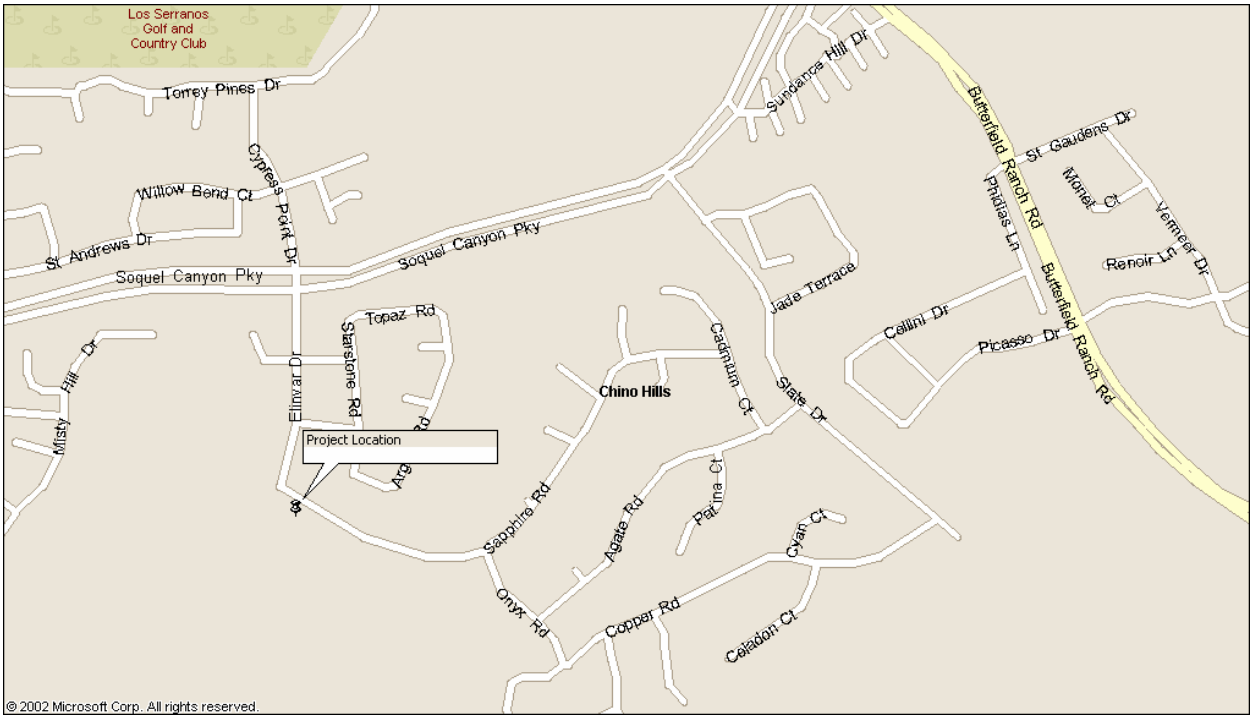

FIGURE 2 – PROJECT LOCATION

PROJECT DESCRIPTION

California State Parks is proposing to construct an improved paved two-lane road on the general alignment of the existing unimproved dirt entrance road for a distance of approximately 2 miles. Construction would relocate the road onto a more favorable alignment, as feasible, and utilize retaining walls. The project would also include the construction of a multi-use trail, include underground utilities, a trailhead, road drainage facilities, a park entrance station with utilities, a scenic overlook, a maintenance storage area, comfort station, erosion control measures, and minor intersection improvements.

EXISTING CONDITIONS

Soquel Canyon Road is a six-lane roadway that runs generally east to west in the project vicinity. Access to the Bane Canyon Road entrance to Chino Hills State Park is generally provided at the Soquel Canyon Road/Elvinar Drive intersection. The intersection is signalized and provides westbound protected-permitted left-turn phasing. This intersection is located north of the Bane Canyon Road entrance and field observations made by Katz, Okitsu & Associates revealed that virtually all park traffic utilized this intersection. Photographs 2, 3, 4 and 5 were taken at this intersection. (Note: All of the photographs displayed in this memorandum were taken on the afternoon of Saturday, May 22, 2004).

Photograph 2 - Looking north from the southeast quadrant of the Soquel Canyon Parkway/Elinvar Drive intersection

Photograph 3 - Looking south along the west side of Elinvar Drive from just south of Soquel Canyon Parkway

Photograph 4 - Looking east from the southwest corner of the Soquel Canyon Parkway/Elinvar Drive intersection

Photograph 5 - Looking west from the southeast corner of the Soquel Canyon Parkway/Elinvar Drive intersection

Elinvar Drive connects Soquel Canyon Road to the north with Sapphire Road. Elinvar Drive provides access to both the park and the residential development located north of the park entrance. Elinvar Drive allows is 44 feet in width and allows on-street parking on both sides of the street. Photograph 6 shows Elinvar Drive looking north from the project frontage.

Photograph 6 - Looking north along the east side of Elinvar Drive from the south side of Sapphire Road

Sapphire Road is a two-lane 36-foot wide roadway that intersects the existing park entrance. On-street parking is allowed on the south side of the street but prohibited on the north side of the street. The parking is prohibited on the north side of the street where a gated roadway provides an emergency entrance/exit to the residential areas north of the project site and Sapphire Road serves as the fire lane access to the entrance/exit. Photographs 7, 8, 9 and 10 show Sapphire Road and the surrounding areas.

Based on data obtained from Assessors Maps, both Elinvar Drive and Sapphire Road have right-of-way widths of 50 feet.

Photograph 7 - Looking east along the south side of Sapphire Road from west of the state park entrance

Photograph 8 - Looking west at the Fire Lane sign on the northeast corner of the Elinvar Drive/Sapphire Road intersection

Photograph 9 - Looking at the fire access road to the residential development north of the state park entrance

Photograph 10 - Looking at the residential development north of the Chino Hills State Park entrance

MACHINE COUNT OBSERVATIONS

Katz, Okitsu & Associates commissioned machine counts on a weekday, Friday, May 21, 2004 and a weekend, Saturday, May 22, 2004 on either side of the existing park entrance in order to both document traffic volumes on the roadways adjacent to the project site and park traffic. The traffic counters were located at the following locations as shown on Figure 3:

- Elinvar Drive south of Moonstone Road
- Sapphire Road west of Onyx Drive

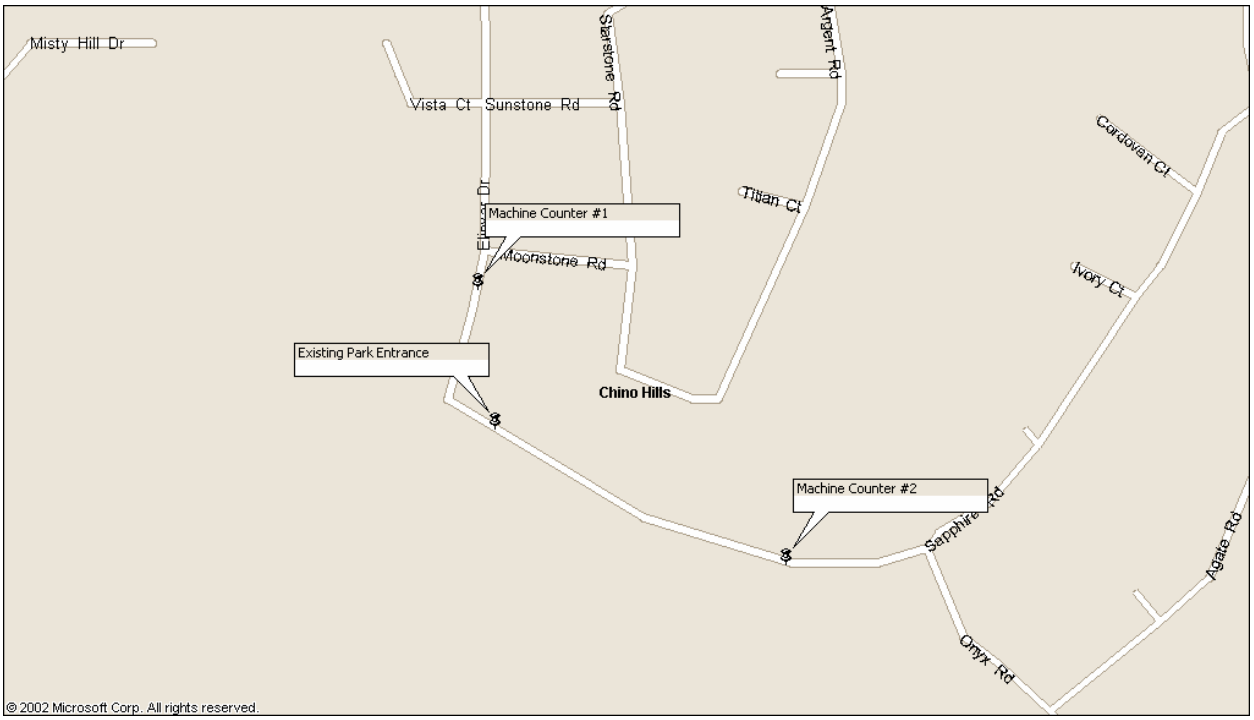

FIGURE 3 – MACHINE COUNTER PLACEMENT LOCATIONS

The machine count data is provided in the Appendix to this memorandum.

The machine count data is summarized in Tables 1 and 2 below.

Table 1 – Friday, May 21, 2004 Machine Count Data Summary

Time Period	Elivar Drive s/o Moonstone Road			Sapphire Road w/o Onyx Drive			Total Park Trips
	NB	SB	TOTAL	EB	WB	TOTAL	
Midnight to 1AM	2	3	5	2	1	3	2
1AM to 2AM	1	1	2	1	1	2	0
2AM to 3AM	0	2	2	1	0	1	1
3AM to 4AM	0	0	0	0	0	0	0
4AM to 5AM	3	1	4	1	3	4	0
5AM to 6 AM	11	7	18	0	11	11	7
6AM to 7AM	31	7	38	7	29	36	2
7AM to 8AM	71	22	93	19	70	89	4
8AM to 9AM	45	34	79	28	42	70	9
9AM to 10AM	18	16	34	11	20	31	3
10AM to 11AM	21	9	30	8	13	21	9
11AM to Noon	18	21	39	18	17	35	4
Noon to 1PM	9	14	23	11	10	21	2
1PM to 2PM	25	24	49	20	17	37	12
2PM to 3PM	41	30	71	25	37	62	9
3PM to 4PM	29	50	79	54	22	76	3
4PM to 5PM	22	27	49	25	22	47	2
5PM to 6PM	20	46	66	33	20	53	13
6PM to 7PM	25	31	56	26	20	46	10
7PM to 8PM	16	27	43	25	14	39	4
8PM to 9PM	11	17	28	15	4	19	9
9PM to 10PM	9	14	23	15	14	29	6
10PM to 11 PM	12	13	25	13	11	24	1
11PM to Midnight	5	9	14	9	5	14	0

Table 2 – Saturday, May 22, 2004 Machine Count Data Summary

Time Period	Elivar Drive s/o Moonstone Road			Sapphire Road w/o Onyx Drive			TotalPark Trips
	NB	SB	TOTAL	EB	WB	TOTAL	
Midnight to 1AM	2	2	4	2	2	4	0
1AM to 2AM	2	5	7	5	2	7	0
2AM to 3AM	0	1	1	1	0	1	0
3AM to 4AM	0	0	0	0	0	0	0
4AM to 5AM	0	1	1	1	0	1	0
5AM to 6 AM	3	1	4	1	3	4	0
6AM to 7AM	9	13	22	5	7	12	10
7AM to 8AM	24	23	47	14	20	34	13
8AM to 9AM	24	23	47	14	17	31	16
9AM to 10AM	37	34	71	13	22	35	36
10AM to 11AM	34	35	69	30	21	51	18
11AM to Noon	33	29	62	25	25	50	12
Noon to 1PM	30	26	56	22	21	43	13
1PM to 2PM	32	24	56	21	23	44	12
2PM to 3PM	24	33	57	27	18	45	12
3PM to 4PM	22	36	58	29	17	46	12
4PM to 5PM	21	27	48	20	15	35	13
5PM to 6PM	28	29	57	24	20	44	13
6PM to 7PM	26	21	47	17	21	38	9
7PM to 8PM	27	28	55	25	16	41	14
8PM to 9PM	16	19	35	18	16	34	1
9PM to 10PM	12	20	32	20	12	32	0
10PM to 11 PM	7	11	18	10	7	17	1
11PM to Midnight	3	8	11	8	3	11	0

(Note: When reviewing the data provided in the table, one must understand the machine counters are not 100% accurate. The data can provide order of magnitude information but may have errors in directional volumes, especially on two-lane unstriped roadways as are Elinvar Drive and Sapphire Road. In addition, tube counters may be triggered by other means, such as bicycles or the counters may not properly record vehicles with more than two axles such as pick-up trucks with horse trailers, which were observed.

During the weekend hours between 9AM and 10AM, the drivers of three pick-ups with horse trailers were not sure whether or not to drive up the dirt road together and were observed to drive over the loops several times while turning around.)

The tables show that the peak traffic demand on Elinvar Drive and Sapphire Road adjacent to the project site occurs on Friday between 7AM and 8AM when 90 vehicles were recorded. The weekend peak volumes occurred between 9AM and 10AM when approximately 70 vehicles were recorded.

The data also shows that the peak park trip generation on a Friday occurred between 5PM and 6PM when 13 vehicles trips were recorded. On the weekend, the peak record observation occurred

between 9AM and 10AM when 36 vehicle trips were recorded. Since this number is much higher than any other observation when no other observation exceeded 18 vehicle trips, Katz, Okitsu & Associates supplemented the machine count analysis with manual observations that are summarized in the next section of this memorandum.

MANUAL PARKING AND USAGE OBSERVATIONS (Saturday, May 22, 2004)

Table 3 shows the observed vehicle trips associated with the park entrance. Table 4 shows the observed on-street parking demand.

Table 3 – Observed Vehicle Trips (Saturday, May 22, 2004)

Time Period	Vehicles arriving to park on the street	Vehicles departing from on-street parking	Vehicles entering park entrance	Vehicles exiting park entrance	TOTAL vehicles arriving	TOTAL vehicles departing	Highest Hour Calc.
9:30AM to 10:00 AM	3	3	3	0	6	3	
10:00 AM to 10:30 AM	8	5	1	5	9	10	13
10:30 AM to 11:00 AM	0	3	1	1	1	4	**14**
11:00 AM to 11:30 AM	3	2	3	4	6	6	10
11:30 AM to Noon	1	2	3	3	4	5	11
Noon to 12:30 PM	1	2	1	0	2	2	7
12:30 PM to 1:00 PM	1	2	3	2	4	4	6
1:00 PM to 1:30 PM	1	1	0	5	1	6	10
1:30 PM to 2:00 PM	0	2	0	1	0	3	9
2:00 PM to 2:30 PM	1	4	0	1	1	5	8

Highest Hour Observed - 10:00 AM to 11:00 AM

Table 4 – Observed On-Street Parking Demand (Saturday, May 22, 2004)

Time Period	Cars Parked on the street
9:30AM	10
10:00 AM	10
10:30 AM	13
11:00 AM	10
11:30 AM	11
Noon	10
12:30 PM	9
1:00 PM	8
1:30 PM	8
2:00 PM	6
2:30 PM	3

The manual observations summarized in Table 3 show that the vehicles trips currently generated during the weekend peak period at the parking entrance is 14 trips per hour or less. Observed on-street parking demand never exceeded 13 vehicles and field observations and the photographs

show that this demand is easily accommodated along Elinvar Drive and Sapphire Road. This data is generally consistent with the machine count observations.

SUMMARY OF EXISTING CONDITIONS

Both the traffic volumes and the park trip generation at the Bane Canyon Road entrance to Chino Hills State Park are very light providing very good levels of service. The park is utilized more on the weekends but the volumes generated by the park are still very light.

FORECAST BACKGROUND TRAFFIC GROWTH

Traffic volumes on Elinvar Drive or Sapphire Drive are not expected to increase significantly as a result other area development. The areas located both north and east of the existing project entrance are fully developed as single-family homes. The park is located south and west of the project site.

FORECAST TRAFFIC GROWTH ANTICIPATED WITH THE PROJECT

As previously stated, the project will result in the paving of the existing two-lane dirt road that provides the Bane Canyon Road park access. The paving of this roadway will make this entrance more attractive to park users. During the period on Saturday when visual observations were made, several vehicles with horse trailers started to drive up the dirt road, only to put their vehicles in reverse and back out of the park entrance. Other vehicles were observed to drive slowly past the dirt road park entrance and then turn around and head back toward Soquel Canyon Road.

In addition, the other proposed improvements that include the construction of a multi-use trail that will include underground utilities, a trailhead, road drainage facilities, a scenic overlook, a maintenance storage area, comfort station, erosion control measures, and minor intersection improvements at the project entrance will also increase traffic. This increase in traffic is hard to quantify. It would be anticipated that these improvements would have little impact on trips that have origins or destinations in the Bane Canyon Road park entrance during the weekday periods. On weekends, the park-generated trips may double or even triple to up to 50 weekday peak hour trips.

PROJECT IMPACTS

Traffic Impacts

The project would not be expected to have an impact on the level of service on the roadways adjacent to the project site for the following reasons:

- Existing traffic volumes on the roadways adjacent to the project site (Elinvar Drive and Sapphire Street) are light both during the weekday and on weekends. Traffic volumes are not expected to increase because of other area development.

- The park tends to generate the highest number of vehicle trips during traditional off-peak traffic periods, i.e. weekends.
- Even if project volumes would triple, the resulting volumes using the park would be less than 50 vehicles during peak periods when volumes on Elinvar Drive and Sapphire Road would then be less than 150 peak hour two-way trips.

Parking Impacts

The analysis of on-street parking showed that there is more than enough capacity to accommodate existing and forecast demand. It would be anticipated that the improvements to the entrance would encourage motorists to enter the park on the newly improved and paved roadway, rather than parking on the street. The project may have the affect of actually decreasing on-street parking demand.

SUMMARY

The project is not anticipated to have any traffic circulation or parking impacts.

Appendix
Machine Count Data Collected Friday, May 21, 2004 and Saturday, May 22, 2004

CITY OF CHINO HILLS
SAPPHIRE ROAD/ELINVAR RAD
W/ONYX DRIVE
48 HR DIRECTIONAL VOLUME COUNT

Counts Unlimited Inc.
909-247-6716

Site Code : 419984
Start Date: 05/21/2004
File I.D. : CHSAWOON
Page : 2

EAST/WEST

Begin Time	<------ EBND		------><------ WBND		------><------Combined		------> Saturday	
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.		
12:00 05/22	2	3	0	3	2	6		
12:15	0	6	0	6	0	12		
12:30	0	3	2	7	2	10		
12:45	0 2	10 22	0 2	5 21	0 4	15 43		
01:00	1	6	1	11	2	17		
01:15	2	2	0	3	2	5		
01:30	1	9	0	3	1	12		
01:45	1 5	4 21	1 2	6 23	2 7	10 44		
02:00	0	5	0	5	0	10		
02:15	0	2	0	6	0	8		
02:30	0	7	0	5	0	12		
02:45	1 1	13 27	0 *	2 18	1 1	15 45		
03:00	0	9	0	5	0	14		
03:15	0	6	0	4	0	10		
03:30	0	3	0	3	0	6		
03:45	0 *	11 29	0 *	5 17	0 *	16 46		
04:00	0	6	0	4	0	10		
04:15	0	6	0	3	0	9		
04:30	0	5	0	4	0	9		
04:45	1 1	3 20	0 *	4 15	1 1	7 35		
05:00	0	6	1	5	1	11		
05:15	0	10	0	7	0	17		
05:30	0	1	1	4	1	5		
05:45	1 1	7 24	1 3	4 20	2 4	11 44		
06:00	2	5	4	7	6	12		
06:15	0	2	0	4	0	6		
06:30	1	5	1	7	2	12		
06:45	2 5	5 17	2 7	3 21	4 12	8 38		
07:00	1	6	4	2	5	8		
07:15	3	8	4	5	7	13		
07:30	2	8	7	4	9	12		
07:45	8 14	3 25	5 20	5 16	13 34	8 41		
08:00	4	6	2	5	6	11		
08:15	3	4	5	4	8	8		
08:30	3	6	7	5	10	11		
08:45	4 14	2 18	3 17	2 16	7 31	4 34		
09:00	3	5	4	3	7	8		
09:15	5	2	7	3	12	5		
09:30	3	6	6	2	9	8		
09:45	2 13	7 20	5 22	4 12	7 35	11 32		
10:00	7	0	7	2	14	2		
10:15	12	2	5	3	17	5		
10:30	6	3	2	1	8	4		
10:45	5 30	5 10	7 21	1 7	12 51	6 17		
11:00	9	3	7	1	16	4		
11:15	4	3	6	0	10	3		
11:30	7	1	7	2	14	3		
11:45	5 25	1 8	5 25	0 3	10 50	1 11		
Totals	111	241	119	189	230	430		
Day Totals	352		308		660			
Split %	48.2%	56.0%	51.7%	43.9%				
Peak Hour	10:15	02:30	10:45	12:15	10:15	12:15		
Volume	32	35	27	29	53	54		
P.H.F.	.66	.67	.96	.65	.77	.79		

CITY OF CHINO HILLS
SAPPHIRE ROAD/ELINVAR RAD
W/ONYX DRIVE
48 HR DIRECTIONAL VOLUME COUNT

Counts Unlimited Inc.
909-247-6716

Site Code : 419984
Start Date: 05/21/2004
File I.D. : CHSAWOON
Page : 1

EAST/WEST

Begin Time	EBND A.M.		EBND P.M.		WBND A.M.		WBND P.M.		Combined A.M.		Combined P.M.		Friday
12:00 05/21	1		3		0		2		1		5		
12:15	1		1		0		3		1		4		
12:30	0		4		0		2		0		6		
12:45	0	2	3	11	1	1	3	10	1	3	6	21	
01:00	0		2		0		3		0		5		
01:15	0		4		0		1		0		5		
01:30	0		4		0		8		0		12		
01:45	1	1	10	20	1	1	5	17	2	2	15	37	
02:00	0		3		0		3		0		6		
02:15	0		4		0		2		0		6		
02:30	1		10		0		20		1		30		
02:45	0	1	8	25	0	*	12	37	0	1	20	62	
03:00	0		30		0		11		0		41		
03:15	0		13		0		6		0		19		
03:30	0		5		0		2		0		7		
03:45	0	*	6	54	0	*	3	22	0	*	9	76	
04:00	0		6		0		5		0		11		
04:15	0		4		0		7		0		11		
04:30	0		9		1		3		1		12		
04:45	1	1	6	25	2	3	7	22	3	4	13	47	
05:00	0		7		1		1		1		8		
05:15	0		7		3		5		3		12		
05:30	0		13		4		5		4		18		
05:45	0	*	6	33	3	11	9	20	3	11	15	53	
06:00	0		10		5		3		5		13		
06:15	1		4		4		2		5		6		
06:30	5		7		8		8		13		15		
06:45	1	7	5	26	12	29	7	20	13	36	12	46	
07:00	4		7		15		3		19		10		
07:15	4		7		15		5		19		12		
07:30	3		6		12		4		15		10		
07:45	8	19	5	25	28	70	2	14	36	89	7	39	
08:00	13		2		23		0		36		2		
08:15	8		5		4		2		12		7		
08:30	3		5		8		0		11		5		
08:45	4	28	3	15	7	42	2	4	11	70	5	19	
09:00	4		4		3		4		7		8		
09:15	2		6		9		5		11		11		
09:30	4		3		5		3		9		6		
09:45	1	11	2	15	3	20	2	14	4	31	4	29	
10:00	1		4		2		4		3		8		
10:15	3		4		4		5		7		9		
10:30	3		1		4		2		7		3		
10:45	1	8	4	13	3	13	0	11	4	21	4	24	
11:00	3		3		3		2		6		5		
11:15	5		2		7		0		12		2		
11:30	7		2		6		1		13		3		
11:45	3	18	2	9	1	17	2	5	4	35	4	14	
Totals	96		271		207		196		303		467		
Day Totals		367				403				770			
Split %	31.6%		58.0%		68.3%		41.9%						
Peak Hour	07:30		02:30		07:15		02:30		07:15		02:30		
Volume	32		61		78		49		106		110		
P.H.F.	.61		.50		.69		.61		.73		.67		

CITY OF CHINO HILLS
ELINVAR DRIVE
S/MOONSTONE ROAD
48 HR DIRECTIONAL VOLUME COUNT

Counts Unlimited Inc.
909-247-6716

Site Code : 419935
Start Date: 05/21/2004
File I.D. : CHELSOMO
Page : 2

NORTH/SOUTH

Begin Time	<------ NBND		------><------ SBND		------><------Combined		------> Saturday
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	
12:00 05/22	0	3	2	4	2	7	
12:15	0	10	0	8	0	18	
12:30	2	11	0	6	2	17	
12:45	0 2	6 30	0 2	8 26	0 4	14 56	
01:00	1	16	1	7	2	23	
01:15	0	5	2	3	2	8	
01:30	0	5	1	12	1	17	
01:45	1 2	6 32	1 5	2 24	2 7	8 56	
02:00	0	8	0	6	0	14	
02:15	0	8	0	3	0	11	
02:30	0	4	0	9	0	13	
02:45	0 *	4 24	1 1	15 33	1 1	19 57	
03:00	0	4	0	15	0	19	
03:15	0	6	0	5	0	11	
03:30	0	5	0	5	0	10	
03:45	0 *	7 22	0 *	11 36	0 *	18 58	
04:00	0	6	0	8	0	14	
04:15	0	3	0	9	0	12	
04:30	0	7	0	7	0	14	
04:45	0 *	5 21	1 1	3 27	1 1	8 48	
05:00	1	5	0	8	1	13	
05:15	0	9	0	10	0	19	
05:30	1	5	0	1	1	6	
05:45	1 3	9 28	1 1	10 29	2 4	19 57	
06:00	4	7	2	6	6	13	
06:15	0	8	2	2	2	10	
06:30	2	8	4	6	6	14	
06:45	3 9	3 26	5 13	7 21	8 22	10 47	
07:00	4	3	3	7	7	10	
07:15	6	10	5	10	11	20	
07:30	8	4	4	7	12	11	
07:45	6 24	10 27	11 23	4 28	17 47	14 55	
08:00	3	6	5	6	8	12	
08:15	7	4	5	4	12	8	
08:30	9	4	4	6	13	10	
08:45	5 24	2 16	9 23	3 19	14 47	5 35	
09:00	8	3	8	5	16	8	
09:15	10	3	7	1	17	4	
09:30	8	2	9	7	17	9	
09:45	11 37	4 12	10 34	7 20	21 71	11 32	
10:00	12	2	11	1	23	3	
10:15	6	3	11	2	17	5	
10:30	3	1	6	3	9	4	
10:45	13 34	1 7	7 35	5 11	20 69	6 18	
11:00	9	1	10	3	19	4	
11:15	8	0	7	3	15	3	
11:30	9	2	6	1	15	3	
11:45	7 33	0 3	6 29	1 8	13 62	1 11	
Totals	168	248	167	282	335	530	
Day Totals	416		449		865		
Split %	50.1%	46.7%	49.8%	53.2%			
Peak Hour	09:15	12:15	09:30	02:30	09:15	12:15	
Volume	41	43	41	44	78	72	
P.H.F.	.85	.67	.93	.73	.84	.78	

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ELINVAR DRIVE
S/MOONSTONE ROAD
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NORTH/SOUTH

Begin Time	<------ NBND A.M.		P.M.		------><------ SBND A.M.		P.M.		------><------Combined A.M.		P.M.		------> Friday
12:00 05/21	0		2		0		4		0		6		
12:15	0		3		1		2		1		5		
12:30	1		1		2		4		3		5		
12:45	1	2	3	9	0	3	4	14	1	5	7	23	
01:00	0		6		0		4		0		10		
01:15	0		4		0		5		0		9		
01:30	0		9		0		4		0		13		
01:45	1	1	6	25	1	1	11	24	2	2	17	49	
02:00	0		3		0		2		0		5		
02:15	0		2		0		4		0		6		
02:30	0		22		2		11		2		33		
02;45	0	*	14	41	0	2	13	30	0	2	27	71	
03:00	0		13		0		29		0		42		
03:15	0		9		0		11		0		20		
03:30	0		3		0		5		0		8		
03:45	0	*	4	29	0	*	5	50	0	*	9	79	
04:00	0		4		0		6		0		10		
04:15	0		9		0		5		0		14		
04:30	1		2		0		9		1		11		
04:45	2	3	7	22	1	1	7	27	3	4	14	49	
05:00	1		1		0		11		1		12		
05:15	3		7		2		10		5		17		
05:30	4		5		5		16		9		21		
05:45	3	11	7	20	0	7	9	46	3	18	16	66	
06:00	5		4		0		11		5		15		
06:15	4		3		1		3		5		6		
06:30	10		10		4		8		14		18		
06:45	12	31	8	25	2	7	9	31	14	38	17	56	
07:00	16		4		4		9		20		13		
07:15	14		5		7		6		21		11		
07:30	14		5		3		6		17		11		
07:45	27	71	2	16	8	22	6	27	35	93	8	43	
08:00	24		2		14		2		38		4		
08:15	5		5		11		9		16		14		
08:30	8		1		3		3		11		4		
08:45	8	45	3	11	6	34	3	17	14	79	6	28	
09:00	2		4		5		4		7		8		
09:15	10		2		4		6		14		8		
09:30	3		1		5		2		8		3		
09:45	3	18	2	9	2	16	2	14	5	34	4	23	
10:00	5		4		1		5		6		9		
10:15	4		5		3		2		7		7		
10:30	8		2		4		1		12		3		
10:45	4	21	1	12	1	9	5	13	5	30	6	25	
11:00	3		2		3		3		6		5		
11:15	7		0		8		2		15		2		
11:30	7		1		8		2		15		3		
11:45	1	18	2	5	2	21	2	9	3	39	4	14	
Totals	221		224		123		302		344		526		
Day Totals		445				425				870			
Split %	64.2%		42.5%		35.7%		57.4%						
Peak Hour	07:15		02:30		07:30		02:30		07:15		02:30		
Volume	79		58		36		64		111		122		
P.H.F.	.73		.65		.64		.55		.73		.72		